TC 0079-06

FINAL REPORT
REMEDIAL INVESTIGATION

FORMER CONSTRUCTION DEBRIS LANDFILL #5

CAMP NAVAJO
BELLEMONT, ARIZONA

April 1999

Prepared for:

US Army Corps of Engineers
Sacramento District
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and

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REMEDIAL INVESTIGATION
AT
CAMP NAVAJO

FORMER CONSTRUCTION DEBRIS LANDFILL #5

FINAL REPORT

Contract DACA05-93-D-0019

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LIST OF ACRONYMS

Acronym	Full Phrase
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Heath Services
bgs	below ground surface
CEC	cation exchange capacity
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
COC	chemical of concern
HBGL	health based guidance levels
LCS	laboratory control sample
LDC	Laboratory Data Consultants
mg/kg	milligram per kilogram
MS	matrix spike
MSD	matrix spike duplicate
OC	organochlorine
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
pcf	pounds per cubic foot
PID	photoionization detector
PRG	preliminary remediation goal
QA	quality assurance
QC	quality control
RI	remedial investigation
RPD	relative percent difference
SB	soil boring
SS	surface soil
SSL	soil screening level
SVOC	semivolatile organic compound
TEPH	total extractable petroleum hydrocarbons
TOC	total organic carbon
TP	test pit
TPH	total petroleum hydrocarbons
TRPH	total recoverable petroleum hydrocarbons
USACE	United States Army Corps of Engineers
USAEHA	United States Army Environmental Hygiene Agency
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

SECTION 1
INTRODUCTION

1.1. PURPOSE OF REPORT

This report summarizes the results of the remedial investigation conducted at the former construction debris landfill #5 (NAAD 43, NADA 27, AREE 43) (site) at Camp Navajo (formerly Navajo Depot Activity), in Bellemont, Arizona (Figure 1-1). Tetra Tech was retained by the United States Army Corps of Engineers (USACE) to conduct the work described in this report.

1.2. SITE BACKGROUND

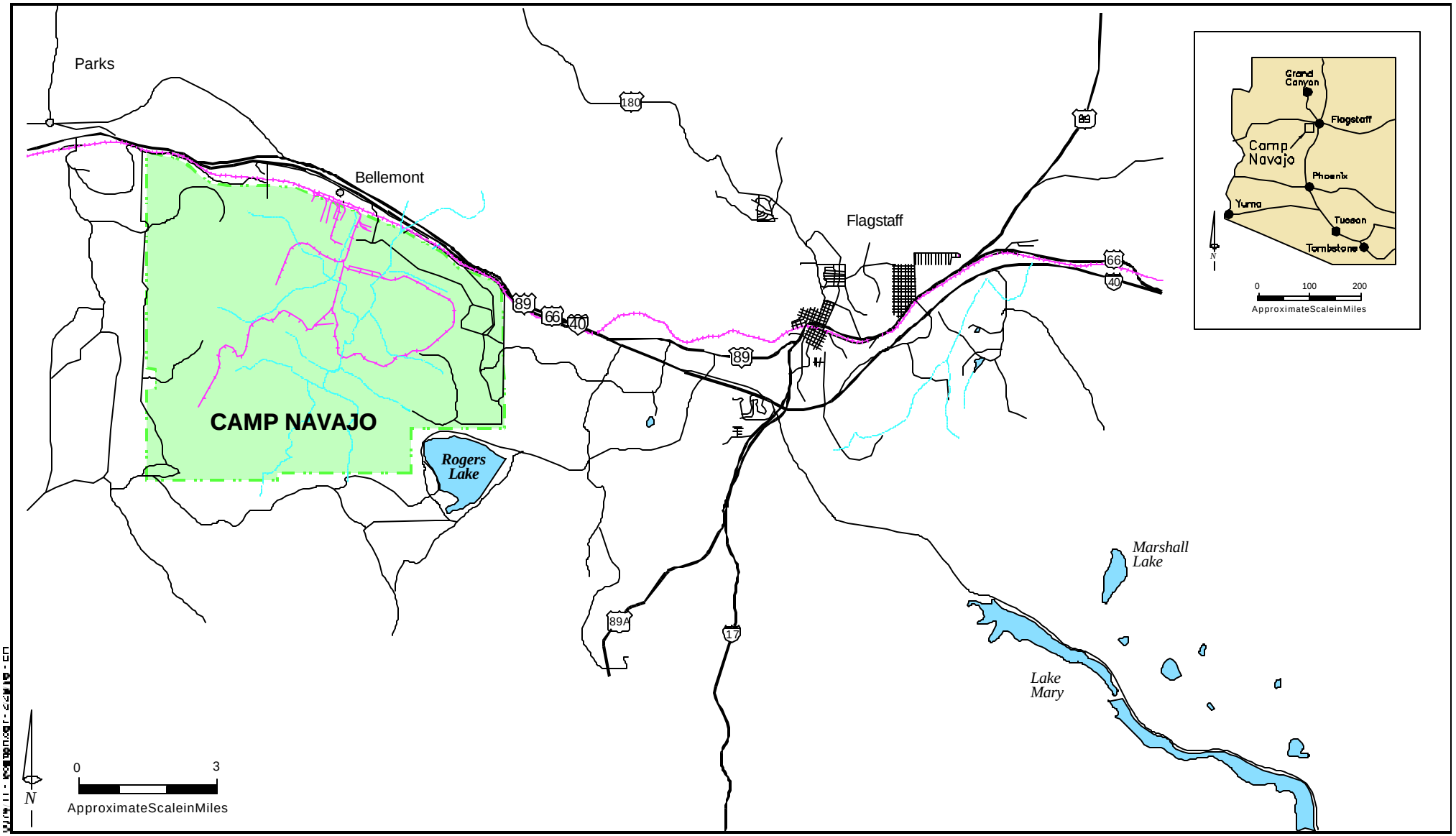
1.2.1. Site Description

Former construction debris landfill #5 was identified by aerial photographs and site visits (Figure 1-2). The landfill is located west of the Old (Navajo) Indian Village, in a clearing immediately adjacent to igloo area G (Figure 1-3). The period of operation of this landfill is not known. The landfill has an area of about four acres (EBASCO 1990; USAEHA 1987).

Aerial photographs of this landfill show patterns that indicate earthmoving or trenching activities. Although the landfill is covered with soil, some waste materials are still visible at the ground surface. These materials include wood, concrete, bricks, metal, glass, asphalt, roofing material, and ceramic tile (USAEHA 1987). There are also asbestos-containing shingles at the landfill. The material appears to have been burned at the site and is consolidated in a mound at the center of the clearing.

1.2.2. Previous Investigations

Tetra Tech found no information regarding previous investigations of the former construction debris landfill #5.



CampNavajoisinnorthcentralArizona
about12mileswestofthecityofFlagstaff.

LEGEND:

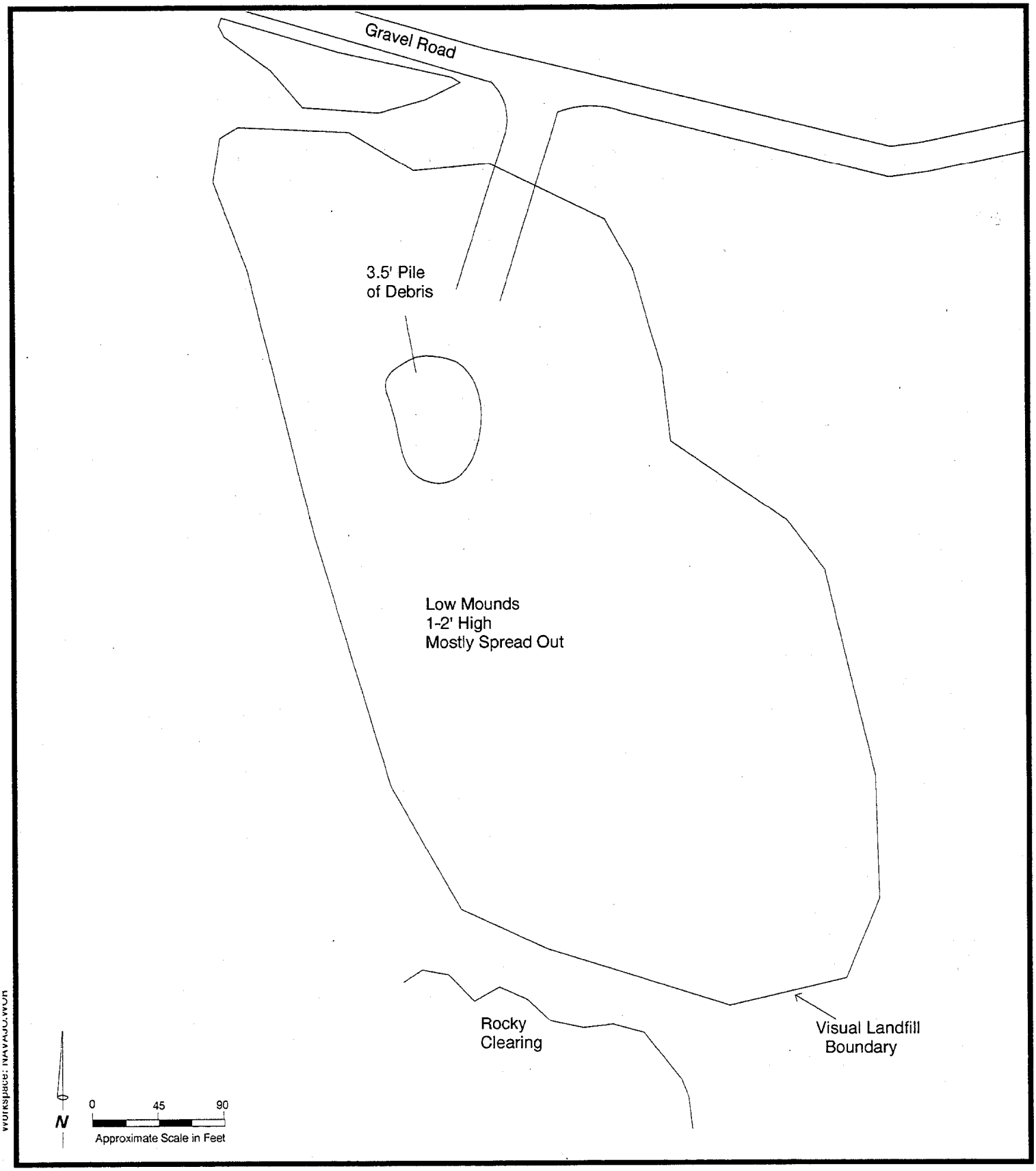
- Highways
- Roads
- Railroad
- Rivers/Streams

Camp Navajo Location Map

Camp Navajo
Bellemont,Arizona

Figure 1-1

Tetra Tech, Inc.



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Former Construction Debris Landfill #5

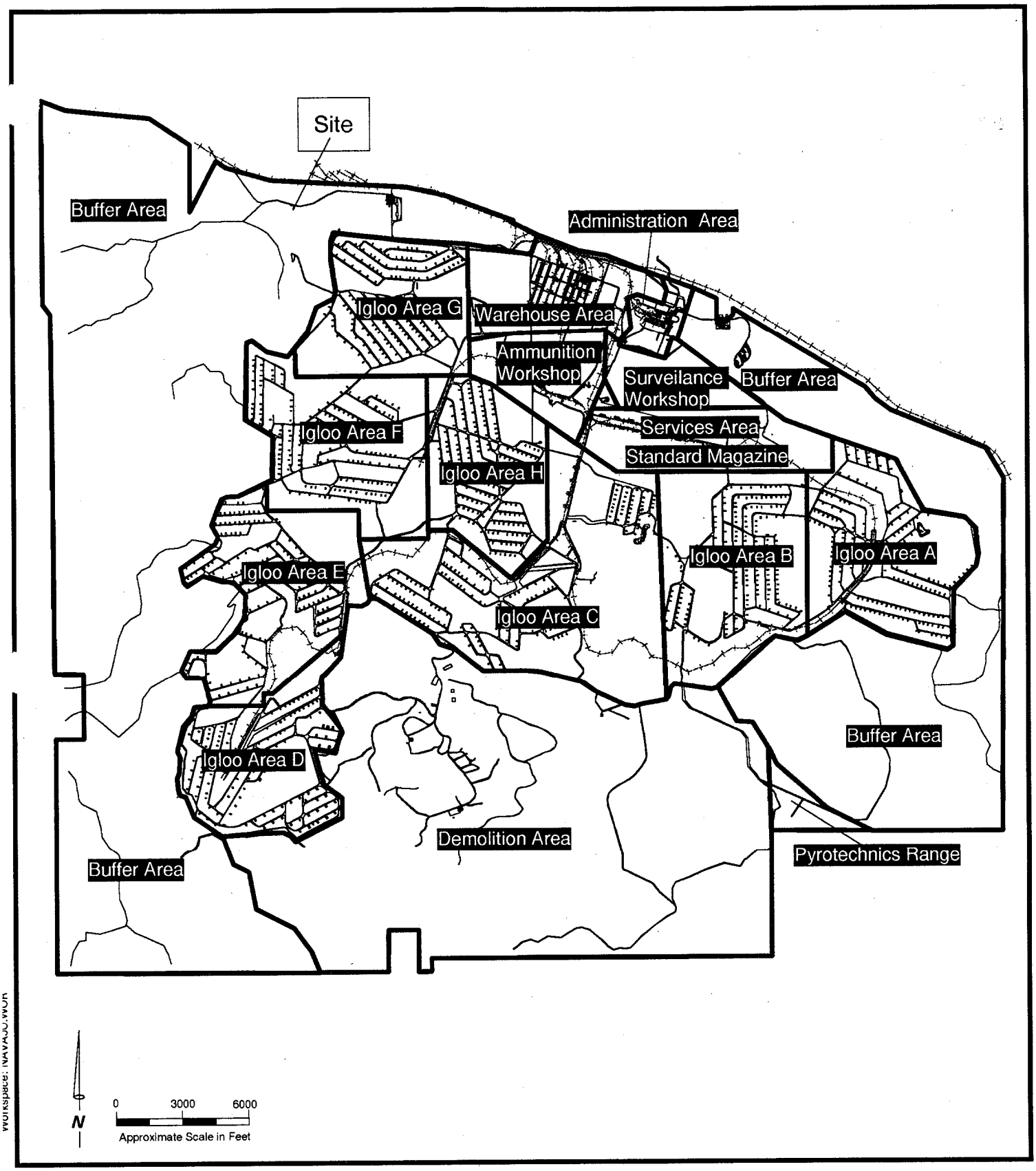
No Window

Site Plan

Camp Navajo, Bellemont, Arizona

Figure 1-2

Tetra Tech, Inc.



Former Construction Debris Landfill #5

Site Map

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 1-3

1.3. STATEMENT OF THE PROBLEM

The operation of the former construction debris landfill #5 is largely undocumented. Inspections of the site indicate that construction debris is the primary waste. However, evidence of earth moving activities and trenching raises the possibility that other solid or liquid wastes may have been disposed of at the site and buried. Disposal practices throughout Camp Navajo included burial in excavated trenches at other sites. Therefore, contaminants from waste other than construction debris may exist on the site and pose a threat to the environment.

1.4. REPORT ORGANIZATION

This report follows United States Environmental Protection Agency (USEPA) guidance for remedial investigation (RI) reports in the Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (USEPA 1988). Section 2 describes the field investigations conducted as part of the RI. Sections 3 and 4 present the physical and chemical results, respectively. Section 5 presents a discussion of the fate and transport characteristics of the contaminants. Section 6 presents risk screening for the identified contaminants. All results are summarized with conclusions in Section 7.

SECTION 2
SAMPLING PROGRAM

2.1. SAMPLING OBJECTIVES

The specific objectives of the investigation of the former construction debris landfill #5 include identifying buried piping for subsurface sampling, characterizing the nature and extent of surface and subsurface contamination from waste disposal activities, and to determine if chemical contaminants have migrated vertically and impacted shallow ground water.

2.2. SAMPLING APPROACH

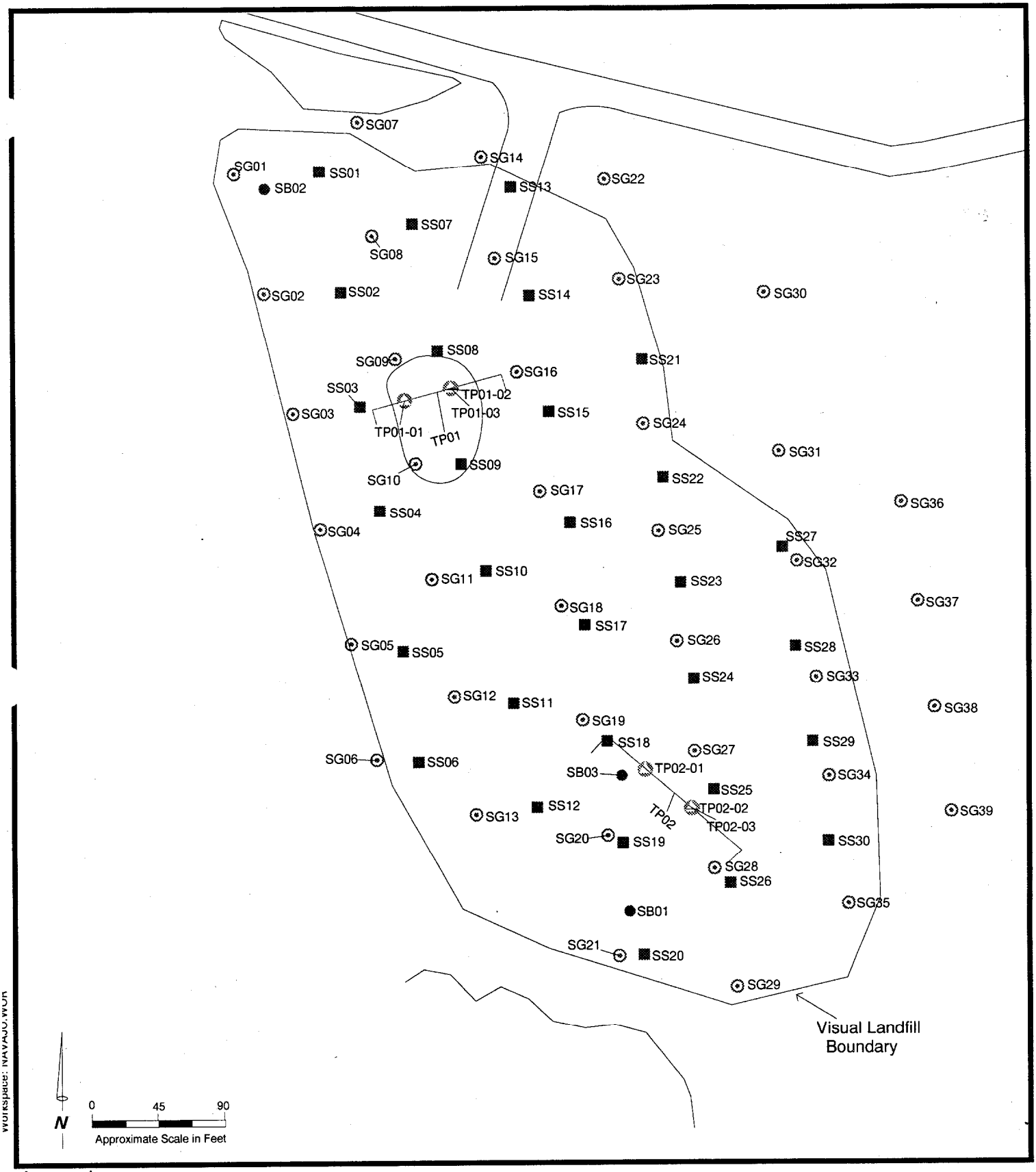
Photo documentation is provided in Appendix A. Field notes are presented in Appendix B. Field investigations were conducted in accordance with the procedures outlined in the field sampling plan provided in Appendix C. Geophysical survey results can be found in Appendix D. Appendix E contains soil boring logs. Surveyor results can be found in Appendix F.

Task 1: Geophysics

A grid survey using electromagnetometer was conducted across the entire site on a 25-foot grid (Figure 2-1). This grid was further refined if anything was identified within the 25-foot spacing.

Task 2: Passive Soil Gas Survey

Because many of the contaminants of concern at the former construction debris landfill #5 were likely to be present as vapors in the vadose zone in the subsurface, passive soil gas probes were installed to identify the presence of volatile and semivolatile contaminants. Soil gas probes were installed on a probabilistic basis. A total of 39 soil gas probes were installed on a 100-foot hexagonal grid as shown in Figure 2-1.



Legend:

- Soil Boring Location
- Surface Soil/Sediment Sample
- Test Pit Sample Location
- Soil Gas Location
- Test Pit

Former Construction Debris Landfill #5

Investigation Plan

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 2-1

Task 3: Surface Soil Sampling

Surface samples were collected on a 100-foot hexagonal grid as shown in Figure 2-1. Thirty surface soil samples were taken at the locations shown in Figure 2-1. Samples were collected by driving a 2-inch by 12-inch California modified split spoon sampler, as described in Appendix C. As shown in Table 2-1, surface soil samples were analyzed for metals, petroleum hydrocarbons, semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), percent water, and pH. Three samples also were analyzed for total organic compounds (TOC), redox potential, bulk density, and grain size.

Task 4: Soil Boring and Sampling

Three soil borings were drilled and sampled as part of this investigation (Figure 2-1). Each boring was drilled to refusal on basalt. Drilling was conducted using hollow stem augers on a CME high torque (HT) drilling rig, as described in Appendix C. Samples were collected by driving a 2-inch by 12-inch California modified split spoon sampler, as described in Appendix C. Split spoon sampling was done in accordance with ASTM D1586. As shown in Table 2-1, soil samples were analyzed for metals, petroleum hydrocarbons, SVOCs, pesticides, PCBs, percent water, and pH. Samples collected at five and ten feet below ground surface (bgs) were also analyzed for volatile organic compounds (VOCs) to verify soil gas results. One sample also was analyzed for bulk density and grain size.

Task 5: Excavation Sampling

Two excavations were conducted within the known extent of the landfill (Figure 2-1). The excavations extended to basalt at depths between one and five feet bgs. Two soil samples were collected from each excavation using the excavator bucket. Each excavation was described in detail by the supervising geologist. The samples were collected based on visual appearance (suspicious materials or fine-grained materials) and photoionization detector (PID) screening. Samples were collected from the soil directly beneath the bottom of the landfill material. All excavation samples were analyzed for metals, petroleum hydrocarbons, PCBs, pesticides, pH, and SVOCs (Table 2-1).

Task 6: Surveying

After the investigation was completed, Aztech Surveying, an Arizona-licensed land surveyor, surveyed the horizontal location of the samples. Horizontal coordinates for each location were surveyed relative to a permanent control point established on-site. Horizontal control is accurate to ± 0.1 feet. Elevations of the soil borings, with water associated with them, were surveyed to an accuracy of ± 0.01 feet. Sample locations in Figure 2-1 are based on survey results. A table of surveyed sample locations is included in Appendix F.

Table 2-1
Former Construction Debris Landfill #5 Sample Analyses

Sample ID	Sample Date	Depth (feet)	Media	Percent Water ASTM D2216	Total Organic Carbon WBLACK	Redox Potential ASTM D1498	Dry Density ASTM D2937	Particle-Size Distribution ASTM D422	Metals SW6010A	Mercury SW7471A	Petroleum Hydrocarbons BLS-191	Petroleum Hydrocarbons BLS-418 1 AZ	Volatile Organic Compounds SW8260A	Semivolatile Organic Compounds SW8270B	OC Pesticides and PCBs SW8081
FCDL#5-SS01S-01	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS02S-01	9/23/95	1	X	X	X	X	X	X	X	X	X	X		X	X
FCDL#5-SS03S-01	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS04S-01	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS05S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS06S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS07S-01	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS08S-01	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS09S-01	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS10S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS11S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS12S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS13S-01	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS14S-01	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS15S-01	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS16S-01	9/23/95	1	X	X	X	X	X	X	X	X	X	X		X	X
FCDL#5-SS17S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS18S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS19S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS20S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS21S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS22S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS23S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS24S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS25S-01	9/24/95	1	X	X					X	X	X	X		X	X

Table 2-1
Former Construction Debris Landfill #5 Sample Analyses
continued

Sample ID	Sample Date	Depth (feet)	Media	Percent Water ASTM D2216	Total Organic Carbon WBLACK	Redox Potential ASTM D1498	Dry Density ASTM D2937	Particle-Size Distribution ASTM D422	Metals SW6010A	Mercury SW7471A	Petroleum Hydrocarbons BLS-191	Petroleum Hydrocarbons BLS-418 1 AZ	Volatile Organic Compounds SW8260A	Semivolatile Organic Compounds SW8270B	OC Pesticides and PCBs SW8081
FCDL#5-SS26S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS27S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS28S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS29S-01	9/24/95	1	X	X	X	X	X	X	X	X	X	X		X	X
FCDL#5-SS30S-01	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS31S-01*	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS32S-01*	9/23/95	1	X	X					X	X	X	X		X	X
FCDL#5-SS33S-01*	9/24/95	1	X	X					X	X	X	X		X	X
FCDL#5-TP01S-01	4/23/96	3	X	X					X	X	X	X		X	X
FCDL#5-TP01S-02	4/23/96	3.5	X	X	X	X			X	X	X	X		X	X
FCDL#5-TP02S-01	4/23/96	1.5	X	X					X	X	X	X		X	X
FCDL#5-TP02S-02	4/23/96	2.5	X	X	X	X			X	X	X	X		X	X
FCDL#5-TP03S-01*	4/23/96	3.5	X	X	X	X			X	X	X	X		X	X
FCDL#5-SB01S-01	5/3/96	0.5	X	X					X	X	X	X		X	X
FCDL#5-SB01S-02	5/3/96	2.5	X	X					X	X	X	X		X	X
FCDL#5-SB02S-01	5/3/96	0.5	X	X					X	X	X	X		X	X
FCDL#5-SB02S-02	5/3/96	2.5	X	X					X	X	X	X		X	X
FCDL#5-SB02S-03	5/3/96	5	X	X					X	X	X	X	X	X	X
FCDL#5-SB03S-01	5/3/96	0.5	X	X					X	X	X	X		X	X
FCDL#5-SB03S-02	5/3/96	2.5	X	X					X	X	X	X		X	X
FCDL#5-SB03S-03	5/3/96	5	X	X					X	X	X	X	X	X	X
FCDL#5-SB03S-04	5/3/96	10	X	X			X	X	X	X	X	X	X	X	X
FCDL#5-SB04S-03*	5/3/96	5.5	X	X					X	X	X	X	X	X	X

Notes:
* Blind duplicate sample (See section 4.5
ASTM American Society for Testing and Materials

2.3. SAMPLE ANALYSIS

Thirty-nine passive soil gas probes, 52 soil samples, were collected and analyzed during this investigation. The soil gas probes were analyzed for a select suite of VOCs, SVOCs, and petroleum hydrocarbons by Gore Laboratories in Maryland. Soil sample analyses conducted as part of this investigation included metals, petroleum hydrocarbons, SVOCs, VOCs, pesticides, PCBs, TOC, redox potential, percent moisture, and pH by Quanterra Laboratories in California. Four soil samples also were analyzed for bulk density and particle-size distribution by Earth Tech Laboratories in California. Table 2-1 summarizes the samples collected and the types of analyses conducted on each soil sample.

SECTION 3
PHYSICAL CHARACTERISTICS

3.1. SURFACE FEATURES

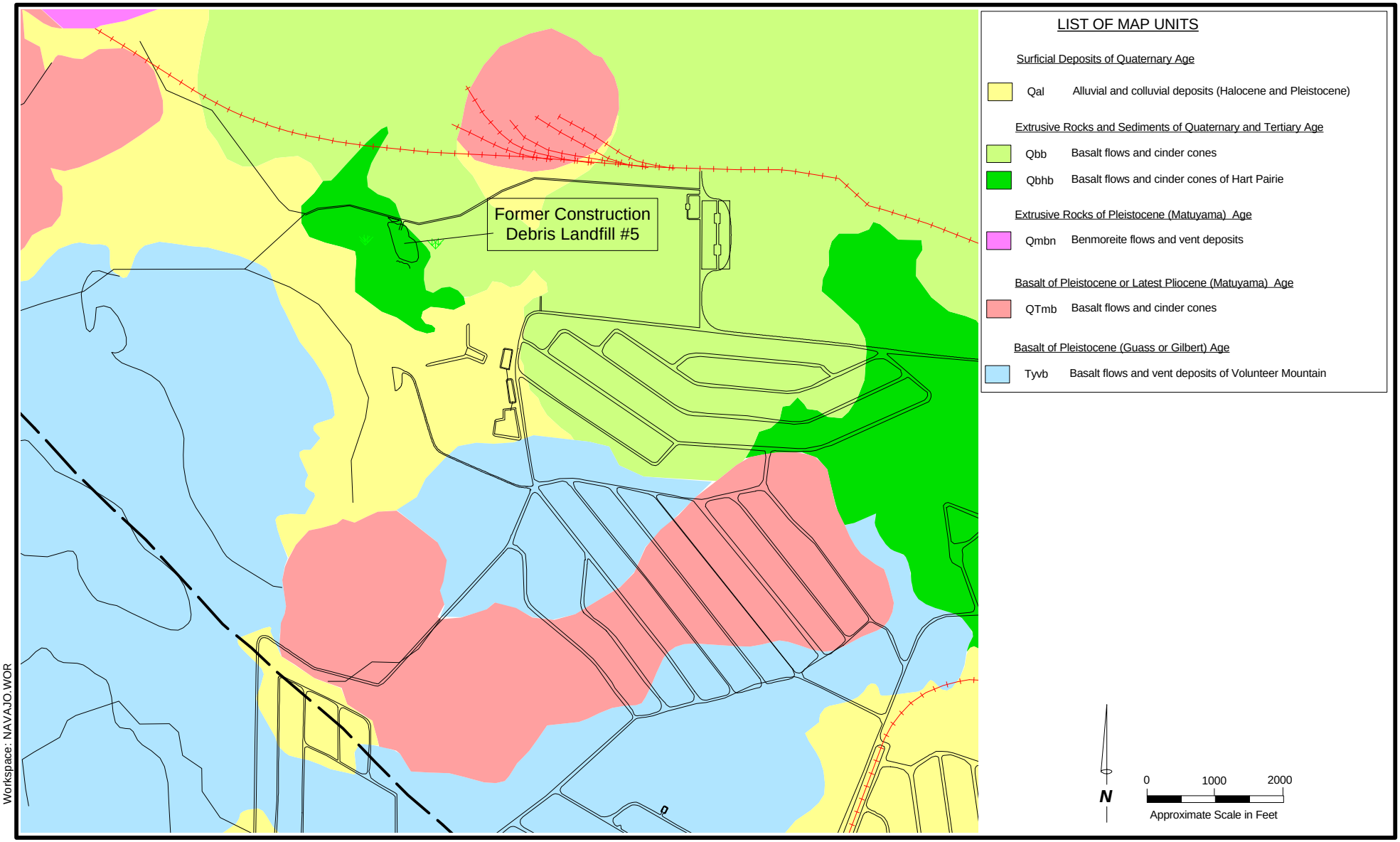
Surface features at the site consist of a grass covered area within a small northwest-southeast trending valley bisected by a dry creek bed and rimmed by pine trees. The bulk of the visible material deposited encompasses an area of approximately four acres located in the northwestern portion of the valley and consists primarily of construction debris (concrete and rebar) and ash which includes glassy material.

The topography in the area of the site is generally of low relief, and slopes to the south. Ground surface generally consists of clay with less than 30 percent of sand.

3.2. GEOLOGY

The upper 20 feet of soil beneath the site consists of clay with varying amounts of silt, sand, or gravel, ranging from nine to 57 percent. Occasional fine (< six inches thick) layers of sand are evident.

The following description of the geologic units deeper than 20 feet is compiled from surface geologic mapping (Figure 3-1), from soil borings in other portions of the Warehouse Area, and from geophysical surveys (Tetra Tech 1997a). A soil boring drilled by the National Guard approximately 1,000 feet southeast of the site encountered a thin veneer (<3 feet) of clayey soil overlying a thickness of basalt. This basalt is interpreted to be the Headquarters Basalt which underlies the entire Administration Area as well as the adjacent Warehouse Area. The flow is estimated to be about 40 to 50 feet thick bentonite the site overlies a thickness of Camp Navajo Clay. The Camp Navajo Clay is directly underlain by the Kaibab Formation. The top of the Kaibab Formation is an erosional surface.



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Legend:

Faults

Railroad

Former Construction Debris Landfill #5 Geology Map

Camp Navajo, Bellemont, Arizona

Figure 3-1

Tetra Tech, Inc.

3.3. SOILS

The soils beneath the site have been classified by the Navajo Army Depot Soil Survey, Coconino County, Arizona as Soil Unit 8 (USDA 1970). Soil Unit 8 soils are moderately deep clay soils with a very stony loam surface and have zero to eight percent slopes. The surface soil is generally a brown very stony granular loam, having a pH of 6.5 and a thickness of two to six inches. The subsoil is generally a reddish brown blocky clay, having a pH of 7.0 and a thickness of two to four inches. This type of soil comprises approximately 26 percent of Navajo Army Depot soils, which accounts for approximately 7,450 acres of land on the base.

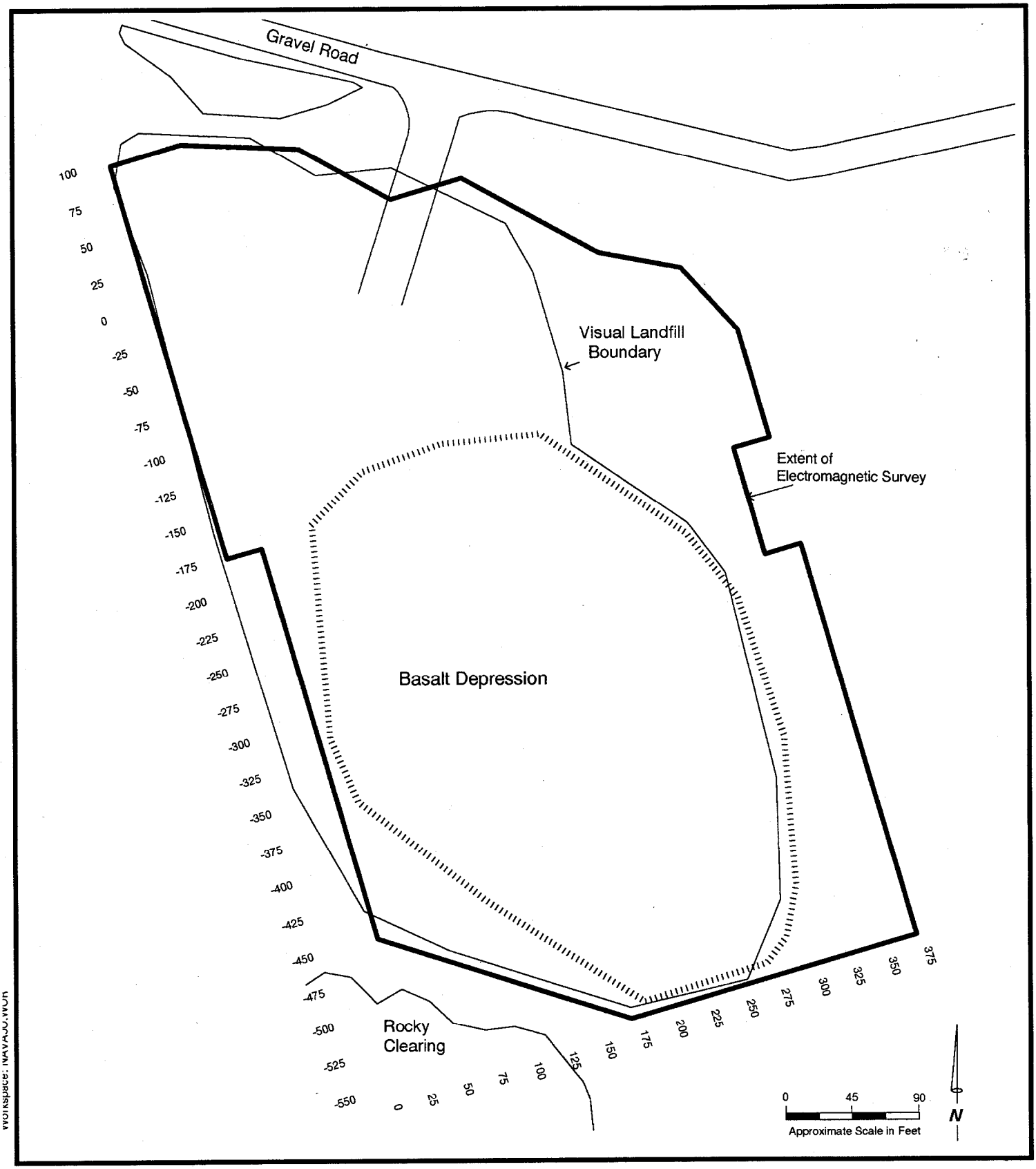
Physical testing of the soil samples collected during this investigation showed moisture ranging from 12.8 percent up to 19.9 percent. Dry densities of the soils range from 61.1 pounds per cubic foot (pcf) up to 105.3 pcf. Grain size distributions ranged from zero percent gravel, five percent sand, 81 percent fines up to three percent gravel, 16 percent sand, and 95 percent fines. All physical testing results are included in Appendix I.

3.4. HYDROGEOLOGY

Ground water was not encountered during drilling at this site. Laterally discontinuous perched ground water conditions may exist within the basalt. Deeper ground water is likely to be present at an approximate depth of 1,300 feet bgs. This is based on the depth to the regional aquifer as measured in the deep water supply well 2.5 miles southeast of the site.

3.5. GEOPHYSICAL SURVEY

An electromagnetometry survey was conducted across the entire site on a 25-foot grid with a Geonics EM31 (Figure 3-2). The site appears to contain a large depression in basalt, possibly a quarry, which was filled with clay rich soil and construction debris. The fill material contains very low concentrations of iron. Three small areas within the filled depression have anomalous inphase values indicating increased concentrations of iron. One small area within the filled depression has a low conductivity value which could be the result of chemical compounds, such as hydrocarbons, saturating the soil. However, no evidence of such contamination was found during sampling in that area. No unknown utilities were identified during this survey. Geophysical survey results are included in Appendix D.



Former Construction Debris Landfill #5

Geophysical Survey Results

Camp Navajo, Bellemont, Arizona

Figure 3-2

Tetra Tech, Inc.

SECTION 4
NATURE AND EXTENT OF CONTAMINATION

The following section summarizes the nature and extent of contamination at the former Construction Debris Landfill #5. All soil gas results are in Appendix G. All analytical results are tabulated by analysis method in Appendix H. Soil physical characteristics are in Appendix I. Appendix J includes copies of all laboratory reports for this site.

4.1. SOIL GAS

Soil gas samples collected from across the former construction debris landfill #5 contained detectable concentrations of 13 compounds, including VOCs, SVOCs, and petroleum hydrocarbons. The only significant detections of petroleum compounds (greater than one microgram per sorber (µg/sorber)) were at SG01 (undecane at 11.75 µg/sorber), SG06 (undecane at 1.76 µg/sorber), SG14 (undecane at 1.05 µg/sorber), and SG31 (undecane at 3.11 µg/sorber). To evaluate these detections, soil boring SB02 was relocated to SG01 and all soil samples were analyzed for petroleum hydrocarbons. Only one small detection of total petroleum hydrocarbons was identified in samples from SB02.

The only significant detections of SVOCs at the site were at SG18 (naphthalene at 5.98 µg/sorber, acenapthene at 1.93 µg/sorber, and 2-methyl naphthalene at 1.85 µg/sorber), SG19 (naphthalene at 5.49 µg/sorber, 2-methyl naphthalene at 1.83 µg/sorber, and acenapthene at 2.00 µg/sorber), SG28 (naphthalene at 10.04 µg/sorber, fluorene at 1.32 µg/sorber, 2-methyl naphthalene at 3.04 µg/sorber, and acenapthene at 1.88 µg/sorber), and SG35 (naphthalene at 2.30 µg/sorber and acenapthene at 1.79 µg/sorber). To evaluate these detections, soil borings SB01 and SB03 and test pit #2 were located in areas where SVOCs were detected. Bis(2-ethylhexyl) phthalate was the only SVOC identified in soil samples from SB01 and SB02. However, numerous high concentrations of polynuclear aromatic hydrocarbons (PAHs) were identified in soil samples from test pit #2.

VOCs were not detected above µg/sorber in any sorber at the site. The compounds detected at less than significant concentrations were limited in distribution and did not show any definitive distribution pattern. All of the detected compounds are typically associated with diesel fuels. The results of this survey were used to delete analyses of VOCs from the sampling program with the exception of a few confirmation analyses (Appendix G).

4.2. SURFACE SOILS

Concentrations of various metals occur naturally in soils. With the exception of cadmium, lead, and selenium, no metals were identified at concentrations above background in any of the surface soil samples collected at this site (Table 4-1). A concentration of cadmium was detected above background (1.5 mg/kg) in one surface soil sample (1.6 mg/kg). Concentrations of lead were detected above background (30 mg/kg) in ten surface soil samples (up to 2,990 mg/kg) (Figure 4-1). These elevated concentrations are likely the result of leaching from materials containing lead disposed of at the site. Concentrations of selenium were detected above background (0.8 mg/kg) in 15 surface soil samples (up to 1.3 mg/kg) (Figure 4-2). All detected metals concentrations, except for arsenic, beryllium, and lead, were detected at concentrations less than the Arizona Department of Environmental Quality (ADEQ) nonresidential Health Based Guidance Levels (HBGL). Arsenic and beryllium were found at concentrations higher than the ADEQ nonresidential HBGLs, but the concentrations are within background ranges previously defined for the installation (Tetra Tech 1997). Lead was found at a concentration higher than the ADEQ nonresidential HBGL in one sample (SS17).

Background concentrations were established by statistical analysis of all samples collected at Camp Navajo. Outliers were identified during the analysis and were eliminated from the statistical test prior to determination of the background concentrations (Tetra Tech 1997).

Concentrations of petroleum hydrocarbons were identified in the surface soil samples collected at this site (Table 4-2). Concentrations of TRPH were detected in 29 surface soil samples above ADEQ nonresidential HBGLs (up to 7,100 mg/kg) (Figure 4-3). These concentrations are likely the result of disposal of petroleum based compounds in the area. The other detected petroleum hydrocarbon (unknown hydrocarbon quantified as Diesel Fuel #2) does not a have set HBGL but is detected at concentrations (up to 7,100 mg/kg) and is evaluated in Section 6.

Twenty SVOCs were identified in surface soil samples collected at this site (Table 4-3). Ten SVOCs (napthalene, acenaphthlene, acenaphthylene, anthracene, benzo(k)fluoranthene, bis(2-ethyhexyl)phthalate, chrysene, di-n-octyl phthalate, fluoranthene, fluorene, and pyrene) were identified at concentrations below ADEQ nonresidential HBGLs and thus are not considered to be contaminants of concern.

Table 4-1
Former Construction Debris Landfill #5 Metal Results

Sample ID	Sample Date	Depth	Arsenic	Barium	Beryllium	Cadmium	Chromium	Lead	Mercury	Potassium	Selenium	Silver
	CRQL		0.5	2	0.2	0.2	0.5	0.5	0.2	500	0.5	0.5
	Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	9.2	189	1.1	0.42	34.9	20.5	< 0.033	1390	0.82	< 0.1
FCDL#5-SS02S-01	9/23/95	1	5.8	341	1.4	0.93	37.5	17.1	< 0.033	1430	1	< 0.1
FCDL#5-SS03S-01	9/23/95	1	4.8	253	1.2	0.88	31.6	18.4	< 0.033	1510	0.78	< 0.1
FCDL#5-SS04S-01	9/23/95	1	5.9	356	1.5	1.2	43.7	15.9	< 0.033	1330	1.2	< 0.1
FCDL#5-SS05S-01	9/24/95	1	5	268	1.2	0.77	31.8	17.5	< 0.033	1490	0.92	< 0.1
FCDL#5-SS06S-01	9/24/95	1	5.2	297	1.3	0.71	33	14.8	< 0.033	1820	0.75	< 0.1
FCDL#5-SS07S-01	9/23/95	1	5.6	233	1.4	0.69	36.1	14.9	< 0.033	1570	1	< 0.1
FCDL#5-SS08S-01	9/23/95	1	6.2	322	0.74	1.4	23.8	140	0.038 J	1390	0.75	0.11 J
FCDL#5-SS09S-01	9/23/95	1	5.3	279	1.2	0.77	33.7	18.2	< 0.033	1290	0.86	< 0.1
FCDL#5-SS10S-01	9/24/95	1	6.1	387	1.6	0.96	39	26	< 0.033	1450	0.85	< 0.1
FCDL#5-SS11S-01	9/24/95	1	4.4	216	0.78	0.66	21.6	24.3	< 0.033	1360	0.87	< 0.1
FCDL#5-SS12S-01	9/24/95	1	5.5	203	1.2	0.62	30.5	21.5	< 0.033	1300	0.7	< 0.1
FCDL#5-SS13S-01	9/23/95	1	4.9	201	1.3	0.63	37.4	14.3	< 0.033	1710	1	< 0.1
FCDL#5-SS14S-01	9/23/95	1	5.3	363	1.3	0.99	34.8	27.1	< 0.033	2110	0.94	< 0.1
FCDL#5-SS15S-01	9/23/95	1	4.7	231	1.1	0.74	28.2	69	< 0.033	2350	0.91	< 0.1
FCDL#5-SS16S-01	9/23/95	1	6.5	435 J-	1.3	1.2 J	39 J	134 J-	< 0.033	1830	0.85	< 0.1
FCDL#5-SS17S-01	9/24/95	1	10.7	550 J-	1.1	1.1 J	50.5 J	2990 J-	< 0.033	2410	1.3 J	< 0.3
FCDL#5-SS18S-01	9/24/95	1	7.2	394 J-	1	1.6 J	26.4 J	139 J-	< 0.033	1770	0.72	< 0.1
FCDL#5-SS19S-01	9/24/95	1	5.4	310 J-	1.2	0.81 J	29.4 J	23.4 J-	< 0.033	1560	0.64	< 0.1
FCDL#5-SS20S-01	9/24/95	1	6	360 J-	1.4	0.95 J	39.3 J	20.9 J-	< 0.033	1770	0.67	< 0.1
FCDL#5-SS21S-01	9/24/95	1	5.2	460 J-	1.5	1.2 J	33.4 J	14.5 J-	< 0.033	1620	0.45 J	< 0.1
FCDL#5-SS22S-01	9/24/95	1	4.4	201 J-	1.2	0.48 J	31.3 J	16.9 J-	< 0.033	1460	0.44 J	< 0.1
FCDL#5-SS23S-01	9/24/95	1	4.9	224 J-	1.1	0.57 J	30.5 J	31.9 J-	< 0.033	1580	0.87	< 0.1
FCDL#5-SS24S-01	9/24/95	1	5.8	318 J-	1.3	0.92 J	37 J	49.5 J-	< 0.033	1870	0.82	< 0.1
FCDL#5-SS25S-01	9/24/95	1	4.6	242 J-	1.2	0.56 J	32.3 J	16.1 J-	< 0.033	1830	0.35 J	< 0.1
FCDL#5-SS26S-01	9/24/95	1	6.1	206 J-	0.73	0.95 J	25.4 J	316 J-	< 0.033	1140	0.69	< 0.1
FCDL#5-SS27S-01	9/24/95	1	4.4	229 J-	1.2	0.69 J	29.1 J	11.4 J-	< 0.033	1670	0.42 J	< 0.1

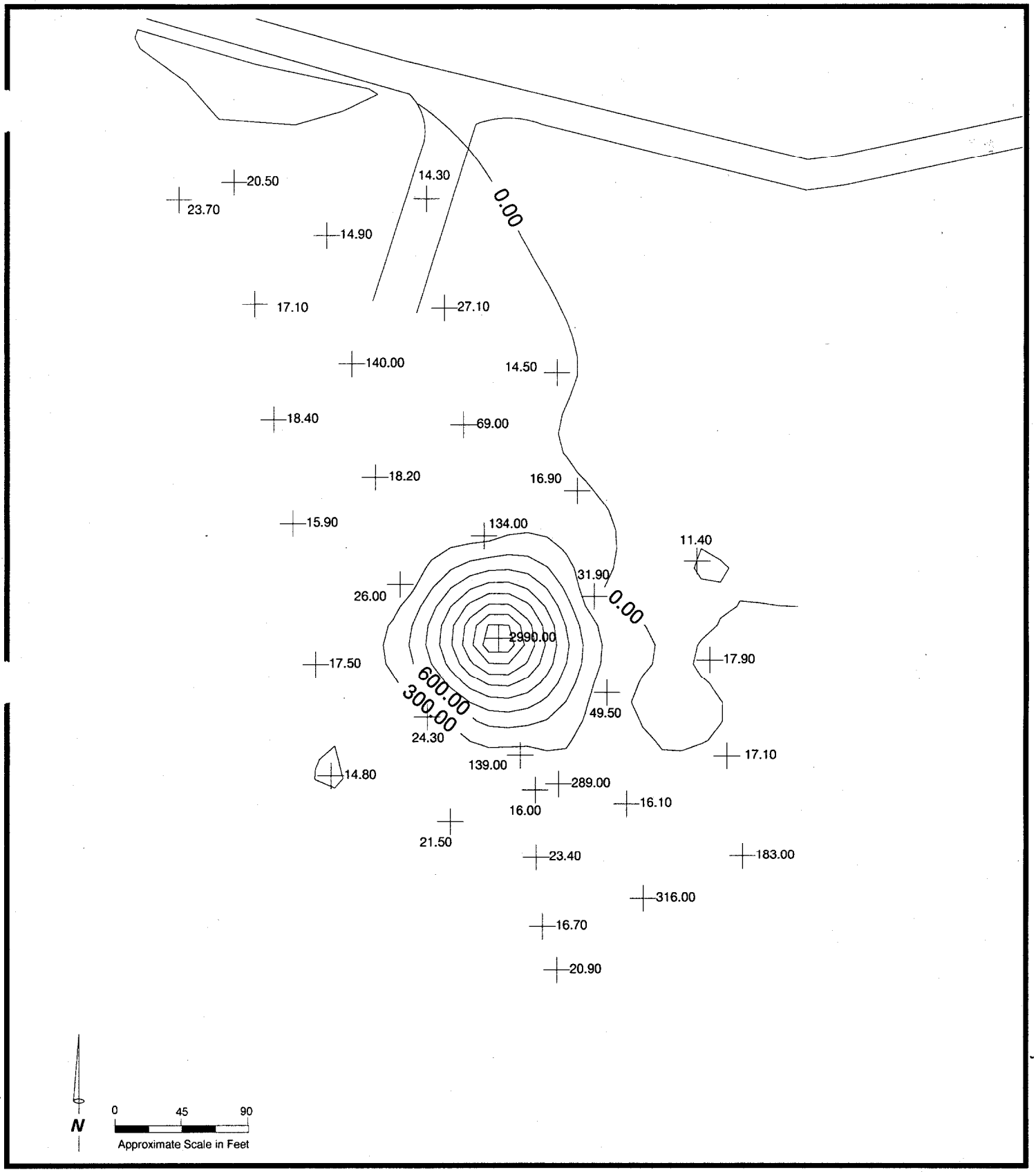
Table 4-1
Former Construction Debris Landfill #5 Metal Results
continued

Sample ID	Sample Date	Depth	Arsenic	Barium	Beryllium	Cadmium	Chromium	Lead	Mercury	Potassium	Selenium	Silver
	CRQL		0.5	2	0.2	0.2	0.5	0.5	0.2	500	0.5	0.5
	Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS28S-01	9/24/95	1	5	220 J-	1.1	0.71 J	28.9 J	17.9 J-	< 0.033	2100	0.73	< 0.1
FCDL#5-SS29S-01	9/24/95	1	5	267 J-	1.3	0.66 J	33.9 J	15.9 J-	< 0.033	1590	0.6	< 0.1
FCDL#5-SS30S-01	9/24/95	1	6	272 J-	1.1	1 J	33.3 J	183 J-	< 0.033	1540	0.43 J	< 0.1
FCDL#5-SS31S-01	9/23/95	1	6	312 J-	1.3	0.79 J	33.6 J	16 J-	< 0.033	1530	0.46 J	< 0.1
FCDL#5-SS32S-01	9/23/95	1	5.2	341 J-	1.2	0.97 J	33.3 J	62.9 J-	< 0.033	1800	0.39 J	< 0.1
FCDL#5-SS33S-01	9/24/95	1	5.1	242 J-	1.2	0.74 J	31.6 J	17.1 J-	< 0.033	1880	< 0.3	< 0.1
FCDL#5-TP01S-01	4/23/96	3	8.9	326	1.5	< 0.1	49.9	63.1	< 0.02	1930	< 0.6	< 0.2
FCDL#5-TP01S-02	4/23/96	3.5	8.7	266	1.2	0.22 J	45.6	94.7	0.038 J	2160	< 0.6	< 0.2
FCDL#5-TP02S-01	4/23/96	1.5	7.1	432	0.89	1	29	289	< 0.02	1230 J	1 J	< 0.2
FCDL#5-TP02S-02	4/23/96	2.5	6	302	1.4	< 0.1	47.7	27.3	< 0.02	1740	< 0.6	< 0.2
FCDL#5-TP03S-01	4/23/96	3.5	6.5	266	0.88	0.25 J	33.9	97.1	0.028 J	1620	0.78 J	< 0.2
FCDL#5-SB01S-01	5/3/96	0.5	6.2	438	1.6	< 0.1	57.2	16.7	< 0.02	1600	< 0.6	0.71 J
FCDL#5-SB01S-02	5/3/96	2.5	6.6	1160	1.2	< 0.15	61.7	7.4	< 0.02	796	< 0.9	< 0.3
FCDL#5-SB02S-01	5/3/96	0.5	9.4	429	2	< 0.15	56.3	23.7	< 0.02	1400	< 0.9	< 0.3
FCDL#5-SB02S-02	5/3/96	2.5	8.9	405	1.7	< 0.1	48.9	20.6	< 0.02	1760	< 0.6	< 0.2
FCDL#5-SB02S-03	5/3/96	5	4	434	0.92	< 0.1	26.8	5.3	< 0.02	806	< 0.6	< 0.2
FCDL#5-SB03S-01	5/3/96	0.5	4.9	414	1.6	< 0.1	50.5	16	< 0.02	1670	< 0.6	< 0.2
FCDL#5-SB03S-02	5/3/96	2.5	5.2	291	1.4	< 0.1	49.6	14.8	< 0.02	2670	< 0.6	< 0.2
FCDL#5-SB03S-03	5/3/96	5	5.2	1180 J	1.5	< 0.1	56	14.3	< 0.02	2600	< 0.6	< 0.2
FCDL#5-SB03S-04	5/3/96	10	7.5	257	1.3	< 0.1	39.3	16.6	< 0.02	2180	< 0.6	< 0.2
FCDL#5-SB04S-03	5/3/96	5.5	5.5	238 UJ	1.4	< 0.1	51.8	13.7	< 0.02	2580	< 0.6	< 0.2

Table 4-1
Former Construction Debris Landfill #5 Metal Results
continued

Sample ID	Sample Date	Depth	Arsenic	Barium	Beryllium	Cadmium	Chromium	Lead	Mercury	Potassium	Selenium	Silver
	CRQL		0.5	2	0.2	0.2	0.5	0.5	0.2	500	0.5	0.5
	Units		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Analyses			48	48	48	48	48	48	48	48	48	48
Detections			48	48	48	36	48	48	3	48	34	2
Maximum Concentration			10.7	1180	2	1.6	61.7	2990	0.038	2670	1.3	0.71
Arizona HBGL - Nonresidential			3.82	28700	1.34	244	5950	1400	123		2030	2030
Arizona HBGL - Nonresidential Hits			48	0	15	0	0	1	0		0	0
Maximum Background Concentration			44	1610	5	1.5	90	30	0.3	0	0.8	2.6
Background Hits			0	0	0	1	0	14	0	0	16	0

Notes:
CRQL Contract required quantitation limits
< Less than the indicated detection limit
Data qualifiers are defined in Appendix H



Legend:

—1170— All concentrations in parts per million (ppm)

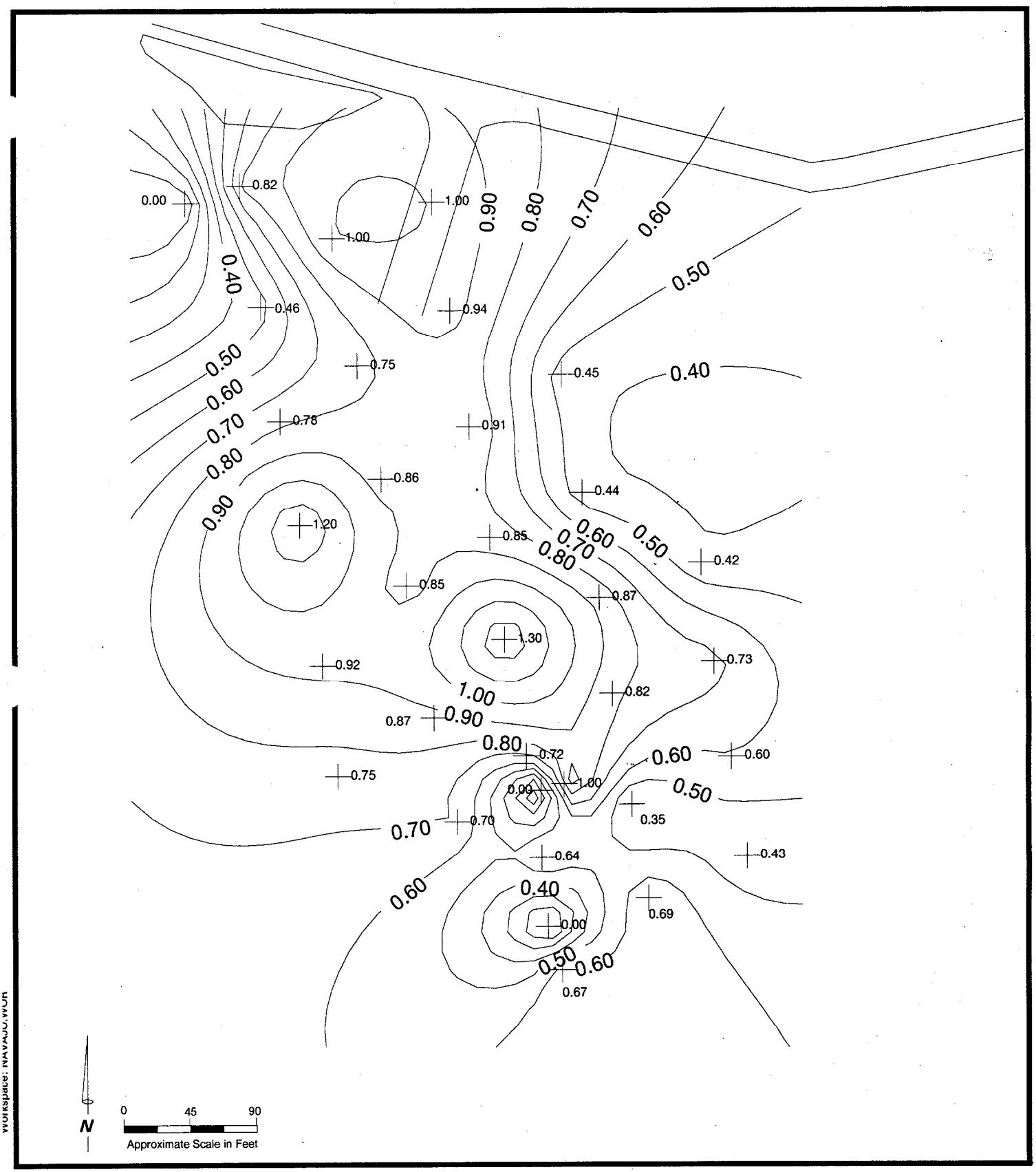
Former Construction Debris Landfill #5

Lead Concentrations in Surface Soils (<2ft)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-1



Legend:

—1170— All concentrations in parts per million (ppm)

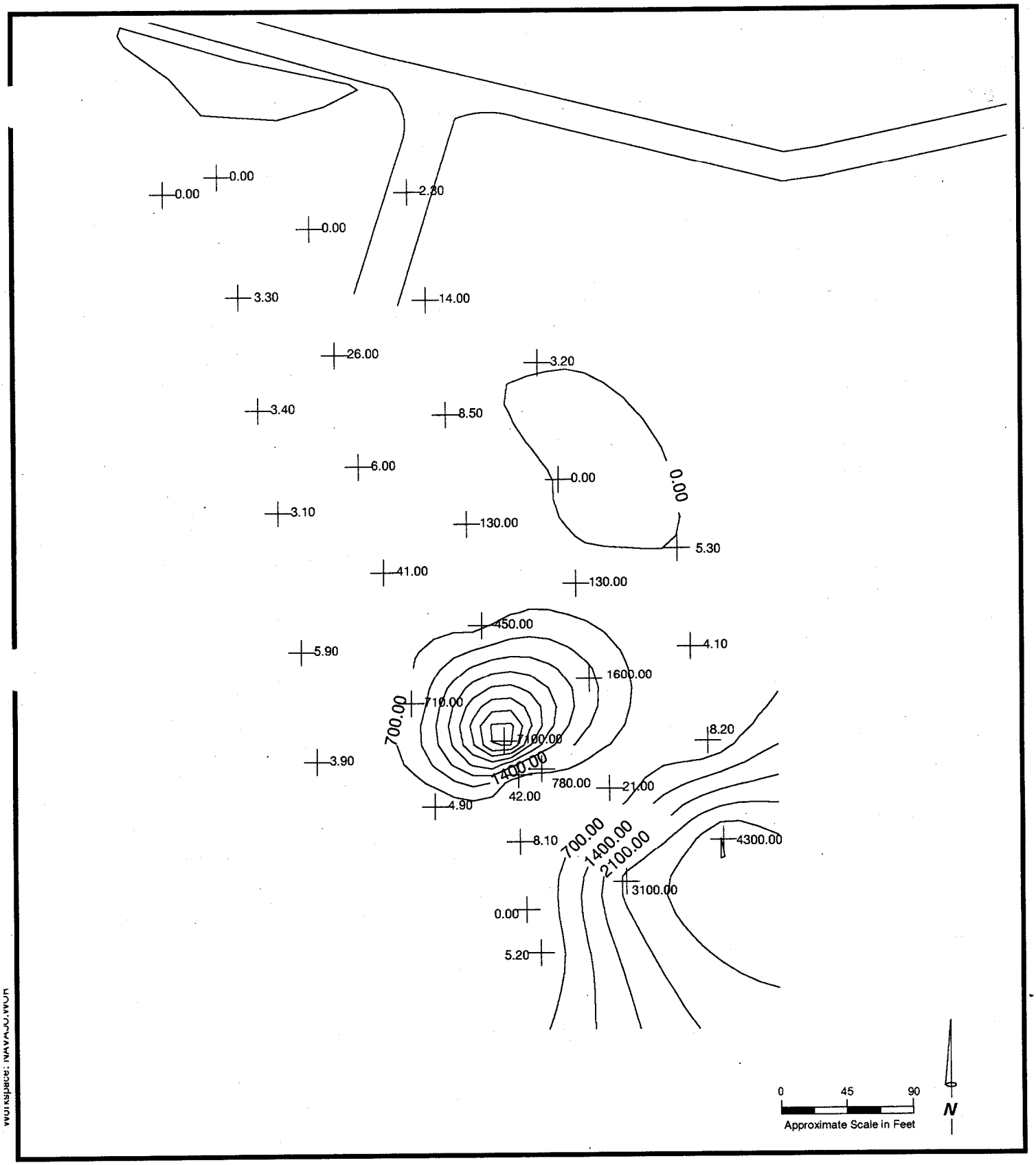
Former Construction Debris Landfill #5

Selenium Concentrations in Surface Soils (<2ft)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-2



Legend:

170 — All concentrations in parts per million (ppm)

Former Construction Debris Landfill #5

TRPH Concentrations in Surface Soil (<2 ft)

Camp Navajo, Bellemont, Arizona

Figure 4-3

Tetra Tech, Inc.

Table 4-2
Former Construction Debris Landfill #5 Petroleum Hydrocarbon Results
(Detections Only)

Sample ID	Sample Date	Depth	TPH, Recoverable	Diesel Fuel #2
		CRQL Units	10 mg/kg	10 mg/kg
FCDL#5-SS03S-01	9/23/95	1	3.4 J	18 J
FCDL#5-SS04S-01	9/23/95	1	3.1 J	< 0
FCDL#5-SS05S-01	9/24/95	1	5.9 J	< 0
FCDL#5-SS06S-01	9/24/95	1	3.9 J	< 0
FCDL#5-SS08S-01	9/23/95	1	26	7100 J
FCDL#5-SS09S-01	9/23/95	1	6 J	< 0
FCDL#5-SS10S-01	9/24/95	1	41	57 J
FCDL#5-SS11S-01	9/24/95	1	710	450 J+
FCDL#5-SS12S-01	9/24/95	1	4.9 J	< 0
FCDL#5-SS13S-01	9/23/95	1	2.3 J	< 0
FCDL#5-SS14S-01	9/23/95	1	14	11 J
FCDL#5-SS15S-01	9/23/95	1	8.5 J	12 J
FCDL#5-SS16S-01	9/23/95	1	130 J-	300 J+
FCDL#5-SS17S-01	9/24/95	1	450 J-	400 J
FCDL#5-SS18S-01	9/24/95	1	7100 J-	1900 J
FCDL#5-SS19S-01	9/24/95	1	8.1 J-	39 J
FCDL#5-SS20S-01	9/24/95	1	5.2 J-	< 0
FCDL#5-SS21S-01	9/24/95	1	3.2 J-	< 0
FCDL#5-SS23S-01	9/24/95	1	130 J-	540 J
FCDL#5-SS24S-01	9/24/95	1	1600 J-	770 J
FCDL#5-SS25S-01	9/24/95	1	21 J-	42 J
FCDL#5-SS26S-01	9/24/95	1	3100 J-	5000 J
FCDL#5-SS27S-01	9/24/95	1	5.3 J-	< 0
FCDL#5-SS28S-01	9/24/95	1	4.1 J-	< 0
FCDL#5-SS29S-01	9/24/95	1	5.7 J-	< 0
FCDL#5-SS30S-01	9/24/95	1	4300 J-	7100 J
FCDL#5-SS31S-01	9/23/95	1	3.3 J-	< 0
FCDL#5-SS32S-01	9/23/95	1	42 J-	460 J+
FCDL#5-SS33S-01	9/24/95	1	8.2 J-	< 0
FCDL#5-TP01S-01	4/23/96	3	100	2000 J
FCDL#5-TP01S-02	4/23/96	3.5	360 J	4500 J
FCDL#5-TP02S-01	4/23/96	1.5	780	2800 J
FCDL#5-TP02S-02	4/23/96	2.5	59	170 J+
FCDL#5-TP03S-01	4/23/96	3.5	660 J	3600 J
FCDL#5-SB02S-02	5/3/96	2.5	5 J	< 0
FCDL#5-SB03S-01	5/3/96	0.5	42	< 0
FCDL#5-SB03S-02	5/3/96	2.5	7.6 J	< 0
FCDL#5-SB03S-03	5/3/96	5	3.5 J	5400 J
FCDL#5-SB03S-04	5/3/96	10	< 2	3400 J
FCDL#5-SB04S-03	5/3/96	5.5	3.6 J	< 0 UJ

Table 4-2
Former Construction Debris Landfill #5 Petroleum Hydrocarbon Results
(Detections Only) *continued*

Sample ID	Sample Date	Depth	TPH, Recoverable	Diesel Fuel #2
		CRQL	10	10
		Units	mg/kg	mg/kg
Analyses			48	48
Detections			39	23
Maximum Concentration			7100	7100
Arizona HBGL - Industrial				
Arizona HBGL - Industrial Hits				
Arizona HBGL - Residential			7000	
Arizona HBGL - Residential Hits			1	

Notes:
CRQL Contract required quantitation limits
< Less than the indicated detection limit
Data qualifiers are defined in Appendix H

Table 4-3
Former Construction Debris Landfill #5 Semivolatile Organic Compound Results
(Detections Only)

Sample ID	Sample Date	Depth	Naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a)pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	bis(2-Ethylhexyl)-phthalate	Chrysene	Di-n-octyl phthalate	Dibenz(a,h) anthracene	Dibenzofuran
		CRQL	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	< 0.014	< 0.04	< 0.013	< 0.018	< 0.016	< 0.02	< 0.014	< 0.022	< 0.021	< 0.018	0.029 J	< 0.037	< 0.019	< 0.024	< 0.022
FCDL#5-SS03S-01	9/23/95	1	0.06 J	< 0.04	0.23 J	0.18 J	0.7	2.7	2.4	3.9	1.6	< 0.018	0.072 J	3.1	< 0.019	0.47	0.067 J
FCDL#5-SS04S-01	9/23/95	1	< 0.014	< 0.04	< 0.013	< 0.018	< 0.016	< 0.02	< 0.014	< 0.022	< 0.021	< 0.018	< 0.026	< 0.037	< 0.019	< 0.024	< 0.022
FCDL#5-SS05S-01	9/24/95	1	< 0.014	< 0.04	< 0.013	< 0.018	< 0.016	< 0.02	< 0.014	< 0.022	< 0.021	< 0.018	0.036 J	< 0.037	< 0.019	< 0.024	< 0.022
FCDL#5-SS08S-01	9/23/95	1	27 J	8.8 J	31 J	6.1 J	93	160	110	160	55	< 1.8	< 2.6	140	< 1.9	18 J	18 J
FCDL#5-SS09S-01	9/23/95	1	0.059 J	< 0.04	0.1 J	< 0.018	0.25 J	0.74	0.52	0.78	0.32 J	< 0.018	< 0.026	0.67	< 0.019	0.1 J	0.047 J
FCDL#5-SS10S-01	9/24/95	1	1.3	0.32 J	0.61	0.052 J	1.1	2	1.5	1.6	0.83 J	< 0.018	< 0.026	2	< 0.019	0.26 J	0.38
FCDL#5-SS11S-01	9/24/95	1	8.9	2.4	4.2	0.52 J	8.9	14	9.7	14	5.2	< 0.09	0.16 J	13	< 0.095	1.5 J	3.2
FCDL#5-SS12S-01	9/24/95	1	0.3 J	0.094 J	0.34 J	0.043 J	0.74	1.9	1.2	2.1	0.72	< 0.018	< 0.026	1.9	< 0.019	0.22 J	0.18 J
FCDL#5-SS13S-01	9/23/95	1	< 0.014	< 0.04	< 0.013	< 0.018	< 0.016	< 0.02	< 0.014	< 0.022	< 0.021	< 0.018	0.12 J	< 0.037	0.023 J	< 0.024	< 0.022
FCDL#5-SS14S-01	9/23/95	1	< 0.014	< 0.04	< 0.013	< 0.018	< 0.016	< 0.02	0.041 J	0.07 J	< 0.021	< 0.018	< 0.026	0.062 J	< 0.019	< 0.024	< 0.022
FCDL#5-SS15S-01	9/23/95	1	< 0.014	< 0.04	< 0.013	< 0.018	0.049 J	0.21 J	0.17 J	0.27 J	0.099 J	< 0.018	< 0.026	0.2 J	< 0.019	< 0.024	< 0.022
FCDL#5-SS16S-01	9/23/95	1	6.9	1.9 J	5.7	< 0.18	10	22	15	20	4.7	6.2	< 0.26	21	< 0.19	< 0.24	3 J
FCDL#5-SS17S-01	9/24/95	1	1.8 J	0.51 J	2.7	< 0.18	7.9	32	26	37	6.6	16	< 0.26	30	< 0.19	2.4	1.3 J
FCDL#5-SS18S-01	9/24/95	1	45	15 J	51	< 0.9	110	310	210	290	59	92	< 1.3	260	< 0.95	17 J	29
FCDL#5-SS19S-01	9/24/95	1	0.016 J	< 0.04	0.028 J	< 0.018	0.068 J	0.19 J	0.14 J	0.19 J	0.047 J	0.055 J	< 0.026 UJ	0.2 J	< 0.019	< 0.024	< 0.022
FCDL#5-SS20S-01	9/24/95	1	< 0.014	< 0.04	0.016 J	< 0.018	0.045 J	0.44	0.37	0.6	0.14 J	0.15 J	< 0.026 UJ	0.5	< 0.019	0.042 J	< 0.022
FCDL#5-SS22S-01	9/24/95	1	< 0.014	< 0.04	< 0.013	< 0.018	< 0.016	0.054 J	0.035 J	0.053 J	< 0.021	< 0.018	< 0.026 UJ	0.052 J	< 0.019	< 0.024	< 0.022
FCDL#5-SS23S-01	9/24/95	1	3.7	1.2 J	5	< 0.18	6.6	12	8.9	12	2.7 J	2.7 J	< 0.26	11	< 0.19	0.97 J	2.5 J
FCDL#5-SS24S-01	9/24/95	1	2.4 J	1.1 J	7	0.3 J	16	34	20	29	4.8	9.3	< 0.26	28	< 0.19	< 0.24	< 0.22
FCDL#5-SS25S-01	9/24/95	1	0.02 J	< 0.04	0.038 J	< 0.018	0.11 J	0.52	0.4	0.53	0.14 J	0.21 J	< 0.026 UJ	0.52	< 0.019	0.049 J	< 0.022
FCDL#5-SS26S-01	9/24/95	1	42	14 J	50 J	3.1 J	120	250	160	230	42	83	< 1.3	240	< 0.95	13 J	29
FCDL#5-SS29S-01	9/24/95	1	< 0.014	< 0.04	< 0.013	< 0.018	< 0.016	0.052 J	0.04 J	< 0.022	< 0.021	< 0.018	< 0.026	0.055 J	< 0.019	< 0.024	< 0.022
FCDL#5-SS30S-01	9/24/95	1	120	43	120	3.3 J	260	450	300	430	74	150	< 1.3	460	< 0.95	21	81
FCDL#5-SS31S-01	9/23/95	1	< 0.014	< 0.04	< 0.013	< 0.018	0.017 J	0.11 J	0.083 J	0.1 J	0.043 J	0.048 J	< 0.026	0.11 J	< 0.019	< 0.024	< 0.022
FCDL#5-SS32S-01	9/23/95	1	0.91 J	< 0.4	1.4 J	< 0.18	3.7	15	10	16	4.1 UJ	4.8	< 0.26	14	< 0.19	1.4 J	0.77 J
FCDL#5-SS33S-01	9/24/95	1	0.17 J	< 0.08	0.26 J	< 0.036	0.42 J	1.8	1.3	1.9	0.6 J	< 0.036	< 0.052	1.8	< 0.038	0.18 J	0.12 J
FCDL#5-TP01S-01	4/23/96	3	14 J	5.8 J	14 J	< 1	33	63	56	87	26	< 0.68	< 0.92	56	< 1.36	< 0.68	9.1 J
FCDL#5-TP01S-02	4/23/96	3.5	38 J	9.3 J	55 J	< 5	180 J	350 J	290 J	510 J	150 J	< 3.4	< 4.6	330 J	< 6.8	< 3.4	35 J
FCDL#5-TP02S-01	4/23/96	1.5	32 J	9.4 J	40 J	< 2.5	120	330	260	310	96 J	< 1.7	< 2.3	270	< 3.4	< 1.7	22 J
FCDL#5-TP02S-02	4/23/96	2.5	13 J	3.8 J	15 J	< 1	44	83	73	91	27 J	< 0.68	< 0.92	81	< 1.36	< 0.68	8.8 J
FCDL#5-TP03S-01	4/23/96	3.5	34	11 J	29 J	< 1.25	67 J	110 J	98 J	160 J	32 J	< 0.85	< 1.15	110 J	< 1.7	< 0.85	18 J
FCDL#5-SB01S-02	5/3/96	2.5	< 0.019	< 0.02	< 0.021	< 0.025	< 0.021	< 0.017	< 0.018	< 0.017	< 0.017	< 0.017	0.39 U	< 0.017	< 0.034	< 0.017	< 0.03
FCDL#5-SB02S-02	5/3/96	2.5	< 0.019	< 0.02	< 0.021	< 0.025	< 0.021	< 0.017	< 0.018	< 0.017	< 0.017	< 0.017	0.37 U	< 0.017	< 0.034	< 0.017	< 0.03
FCDL#5-SB02S-03	5/3/96	5	< 0.019	< 0.02	< 0.021	< 0.025	< 0.021	< 0.017	< 0.018	< 0.017	< 0.017	< 0.017	0.37 U	< 0.017	< 0.034	< 0.017	< 0.03
FCDL#5-SB03S-01	5/3/96	0.5	1.4 J	0.58 J	2.2	< 0.125	8	13	12	18	7.2	< 0.085	< 0.115	13	< 0.17	2.1 J	1.6 J
FCDL#5-SB03S-02	5/3/96	2.5	0.26 J	< 0.04	0.38 J	< 0.05	1.3	2.2	2.1	3.3	1.1	< 0.034	< 0.046	2.4	< 0.068	0.35 J	0.24 J

Table 4-3
Former Construction Debris Landfill #5 Semivolatile Organic Compound Results
(Detections Only) *continued*

Sample ID	Sample Date	Depth	Naphthalene	2-Methyl naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a)pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	bis(2-Ethylhexyl)-phthalate	Chrysene	Di-n-octyl phthalate	Dibenz(a,h) anthracene	Dibenzofuran
		CRQL	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SB03S-03	5/3/96	5	75 J	26 J	74 J	< 2.5	190 J	300 J	220 J	360 J	150 J	< 1.7	< 2.3	250 J	< 3.4	46 J	48 J
FCDL#5-SB03S-04	5/3/96	10	42	14 J	47	< 2.5	120	190	160	250	98	< 1.7	< 2.3	170	< 3.4	31 J	30 J
FCDL#5-SB04S-03	5/3/96	5.5	0.17 J	0.05 J	0.27 J	< 0.025	0.82 J	1.5 J	1.2 J	2.2 J	0.64 J	< 0.017	< 0.023	1.3 J	< 0.034	< 0.017 UJ	0.17 J
Analyses			48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Detections			27	20	28	8	30	32	33	32	30	12	8	33	1	19	24
Maximum Concentration			120	43	120	6.1	260	450	300	510	150	150	0.39	410	0.023	46	81
Arizona HBGL - Nonresidential			16450		24500	24500	122500	4.6	0.8	4.6		4.6	407	462	8050	0.46	
Arizona HBGL - Nonresidential Hits			0		0	0	0	18	24	18		7	0	0	0	12	

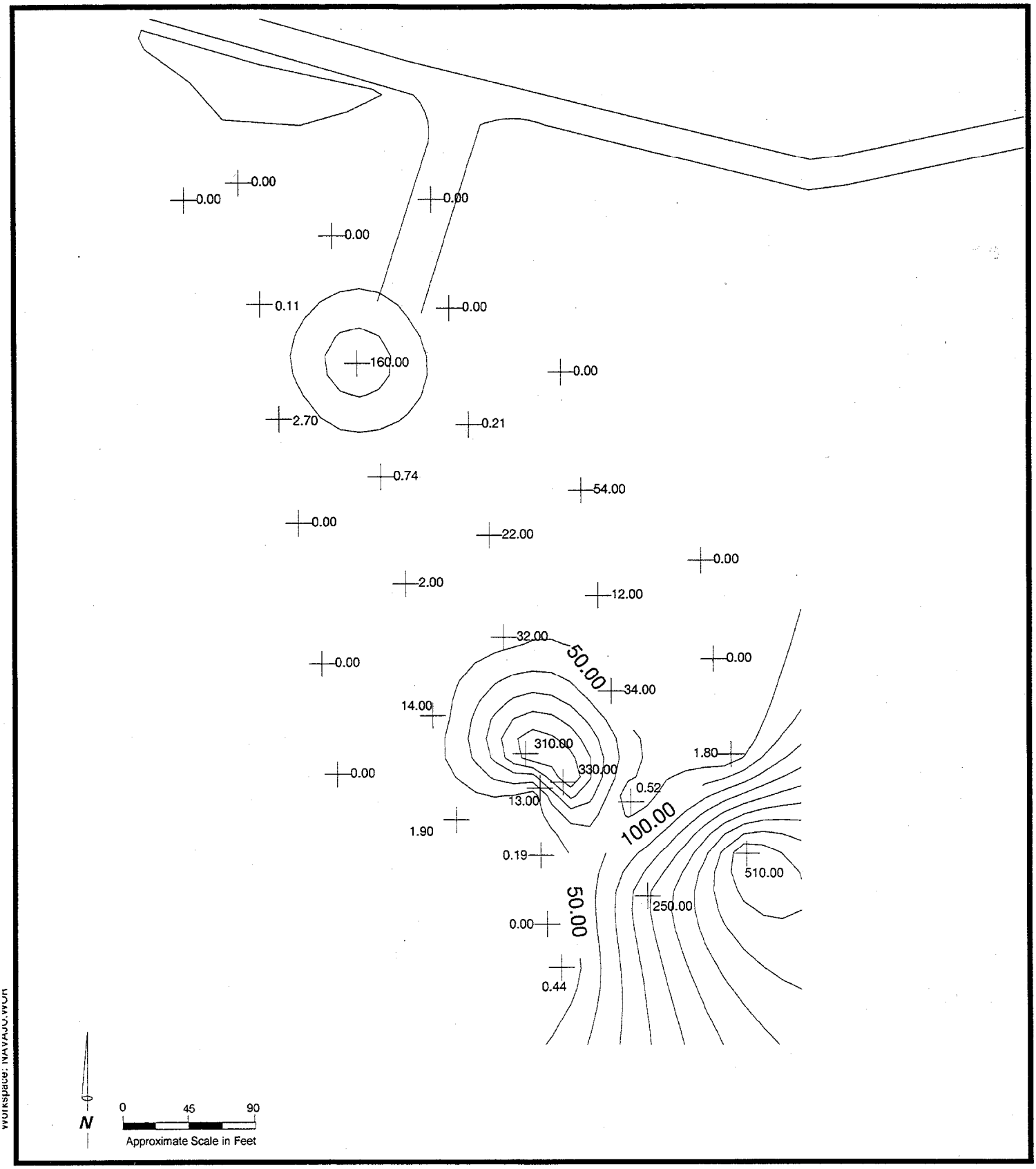
Table 4-3
Former Construction Debris Landfill #5 Semivolatile Organic Compound Results
(Detections Only) *continued*

Sample ID	Sample Date	Depth	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
		CRQL	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	< 0.024	< 0.013	< 0.031	< 0.015	< 0.025
FCDL#5-SS03S-01	9/23/95	1	5.4	0.2 J	1.8	2.1	6.8
FCDL#5-SS04S-01	9/23/95	1	< 0.024	< 0.013	< 0.031	0.024 J	< 0.025
FCDL#5-SS05S-01	9/24/95	1	< 0.024	< 0.013	< 0.031	< 0.015	< 0.025
FCDL#5-SS08S-01	9/23/95	1	310	39	60	250	340
FCDL#5-SS09S-01	9/23/95	1	1.4	0.1 J	0.37 J	0.93	1.4
FCDL#5-SS10S-01	9/24/95	1	4.5	0.7	0.91	3.6	4.6
FCDL#5-SS11S-01	9/24/95	1	34	5.4	5.8	26	35
FCDL#5-SS12S-01	9/24/95	1	4.2	0.36 J	0.81	2.7	4.2
FCDL#5-SS13S-01	9/23/95	1	0.059 J	< 0.013	< 0.031	0.02 J	0.056 J
FCDL#5-SS14S-01	9/23/95	1	0.12 J	< 0.013	< 0.031	0.055 J	0.11 J
FCDL#5-SS15S-01	9/23/95	1	0.33 J	< 0.013	0.1 J	0.16 J	0.33 J
FCDL#5-SS16S-01	9/23/95	1	46	5.8	6	38	51
FCDL#5-SS17S-01	9/24/95	1	59	2.8	7.4	27	58
FCDL#5-SS18S-01	9/24/95	1	740	57	66	470	640
FCDL#5-SS19S-01	9/24/95	1	0.44 J	< 0.013	0.061 J	0.27 J	0.36 J
FCDL#5-SS20S-01	9/24/95	1	0.82	< 0.013	0.17 J	0.23 J	0.72
FCDL#5-SS22S-01	9/24/95	1	0.11 J	< 0.013	< 0.031	0.056 J	0.1 J
FCDL#5-SS23S-01	9/24/95	1	32	4.9	3.7	28	34
FCDL#5-SS24S-01	9/24/95	1	68	7.4	6	49	71
FCDL#5-SS25S-01	9/24/95	1	0.97	< 0.013	0.19 J	0.48	0.84
FCDL#5-SS26S-01	9/24/95	1	520	58	48	380	500
FCDL#5-SS29S-01	9/24/95	1	0.099 J	< 0.013	< 0.031	0.048 J	0.094 J
FCDL#5-SS30S-01	9/24/95	1	1100	150	120	930	970
FCDL#5-SS31S-01	9/23/95	1	0.2 J	< 0.013	0.05 J	0.1 J	0.21 J
FCDL#5-SS32S-01	9/23/95	1	25	1.2 J	4.4 J	14	28
FCDL#5-SS33S-01	9/24/95	1	3.8	0.25 J	0.71	2.8	4.2
FCDL#5-TP01S-01	4/23/96	3	120	17	32	100	140
FCDL#5-TP01S-02	4/23/96	3.5	710 J	78 J	190 J	550 J	800 J
FCDL#5-TP02S-01	4/23/96	1.5	600	44	140	420	690
FCDL#5-TP02S-02	4/23/96	2.5	190	19	35	150	180
FCDL#5-TP03S-01	4/23/96	3.5	230 J	35 J	48 J	200 J	280 J
FCDL#5-SB01S-02	5/3/96	2.5	< 0.039	< 0.024	< 0.017	< 0.023	< 0.026
FCDL#5-SB02S-02	5/3/96	2.5	< 0.039	< 0.024	< 0.017	< 0.023	< 0.026
FCDL#5-SB02S-03	5/3/96	5	< 0.039	< 0.024	< 0.017	< 0.023	< 0.026
FCDL#5-SB03S-01	5/3/96	0.5	29	2.9	8.1	24	26
FCDL#5-SB03S-02	5/3/96	2.5	5.8	0.5 J	1.3	4.3	4.2

Table 4-3
Former Construction Debris Landfill #5 Semivolatile Organic Compound Results
(Detections Only) *continued*

Sample ID	Sample Date	Depth	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
		CRQL	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SB03S-03	5/3/96	5	610 J	96 J	170 J	540 J	490 J
FCDL#5-SB03S-04	5/3/96	10	410	58	110	360	330
FCDL#5-SB04S-03	5/3/96	5.5	3.2 J	0.41 J	0.75 J	3 J	3.3 J
Analyses			48	48	48	48	48
Detections			34	25	30	35	34
Maximum Concentration			790	150	190	840	1100
Arizona HBGL - Nonresidential			16450	16450	4.6		12250
Arizona HBGL - Nonresidential Hits			0	0	16		0

Notes:
CRQL Contract required quantitation limits
< Less than the indicated detection limit
Data qualifiers are defined in Appendix H



Legend:

—1170— All concentrations in parts per million (ppm)

Former Construction Debris Landfill #5

Benzo(a)anthracene in Surface Soils (<2 ft)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-4

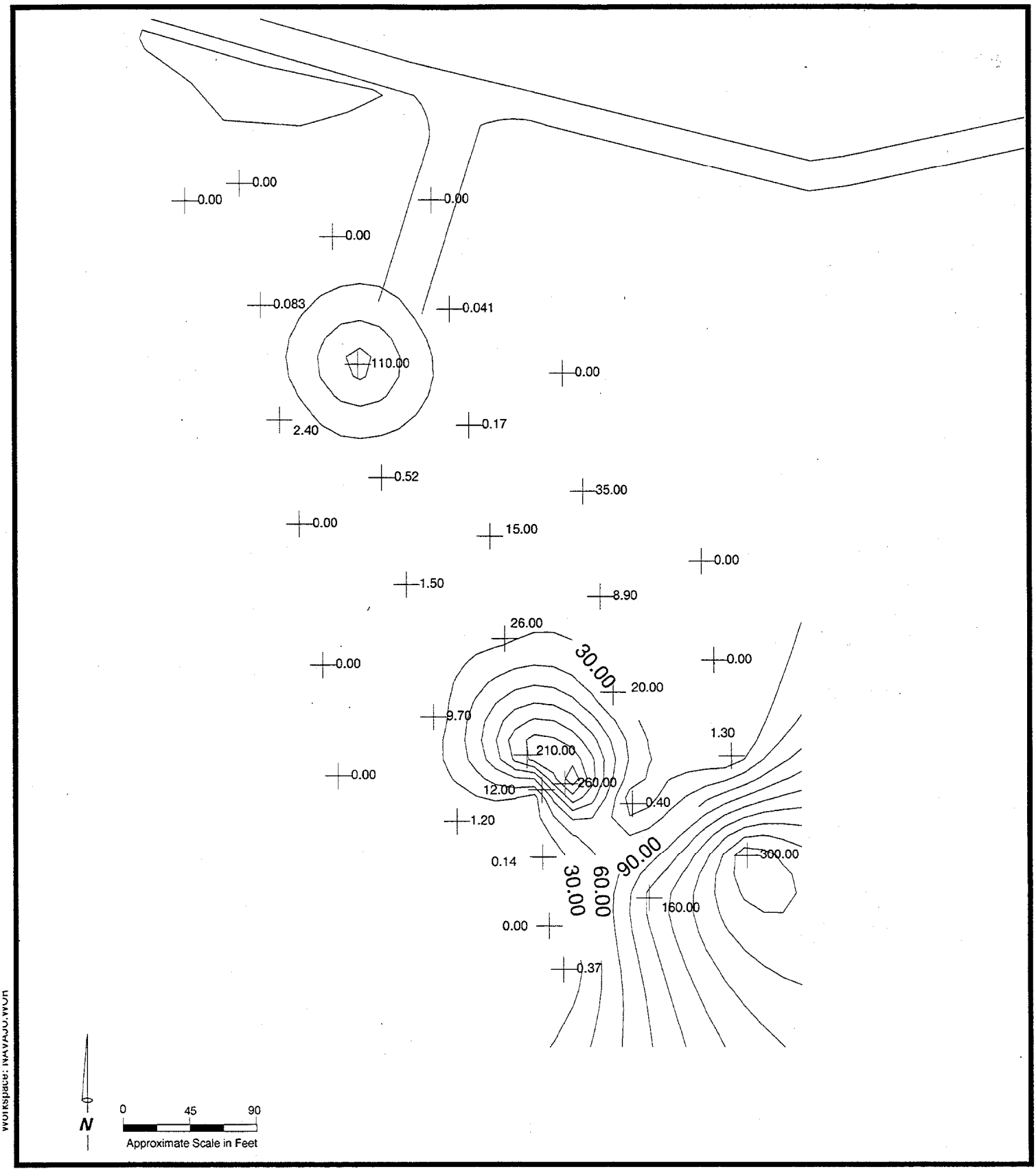
Six SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-c,d)-pyrene) were identified at concentrations above ADEQ nonresidential HBGLs. Concentrations of benzo(a)anthracene were detected above ADEQ nonresidential HBGLs (4.6 mg/kg) in 11 surface soil samples (up to 450 mg/kg) (Figure 4-4). Concentrations of benzo(a)pyrene were detected above ADEQ nonresidential HBGLs (0.8 mg/kg) in 15 surface soil samples (up to 300 mg/kg) (Figure 4-5). Concentrations of benzo(b)fluoranthene were detected above ADEQ nonresidential HBGLs (4.6 mg/kg) in 11 surface soil samples (up to 430 mg/kg) (Figure 4-6). Concentrations of benzo(k)fluoranthene were detected above ADEQ nonresidential HBGLs (4.6 mg/kg) in seven surface soil samples (up to 150 mg/kg) (Figure 4-7). Concentrations of dibenz(a,h)anthracene were detected above ADEQ nonresidential HBGLs (0.46 mg/kg) in ten surface soil samples (up to 21 mg/kg) (Figure 4-8). Concentrations of indeno(1,2,3-c,d)-pyrene were detected above ADEQ nonresidential HBGLs (4.6 mg/kg) in nine surface soil samples (up to 120 mg/kg) (Figure 4-9). The other four detected SVOC (2-methylnaphthalene, benzo(g,h,I)perylene, dibenzofuran, and phenanthrene) do not have set HBGLs but were detected at concentrations (up to 43 mg/kg, 74 mg/kg, 81 mg/kg, and 930 mg/kg, respectively) and are evaluated in Section 6.

A concentration of 4,4-DDE was detected in one surface soil sample (0.027 mg/kg)from soil boring SB03 (Table 4-4). This concentration did not exceed ADEQ nonresidential HBGL and is not considered to be a contaminant of concern.

4.3. SUBSURFACE SOILS

Concentrations of various metals occur naturally in soils. With the exception of lead and selenium, no metals were identified at concentrations above background in any of the subsurface soil samples collected at this site (Table 4-1). Concentrations of lead were detected above background (30 mg/kg) in four subsurface soil samples (up to 97.1 mg/kg) (Figure 4-10). These elevated concentrations are likely the result of leaching from materials containing lead disposed of at the site. A concentration of selenium was detected above background (0.8 mg/kg) in one subsurface soil samples (at 1 mg/kg). All detected metals concentrations, except for arsenic and beryllium, were detected at concentrations less than the Arizona Department of Environmental Quality (ADEQ) nonresidential Health Based Guidance Levels (HBGL). Arsenic and beryllium were found at concentrations higher than the ADEQ nonresidential HBGLs, but the concentrations are within background ranges previously defined for the installation (Tetra Tech 1997).

Background concentrations were established by statistical analysis of all samples collected at Camp Navajo. Outliers were identified during the analysis and eliminated from the statistical test prior to determination of the background concentrations (Tetra Tech 1997).



Legend:

—11.70— All concentrations in parts per million (ppm)

Former Construction Debris Landfill #5

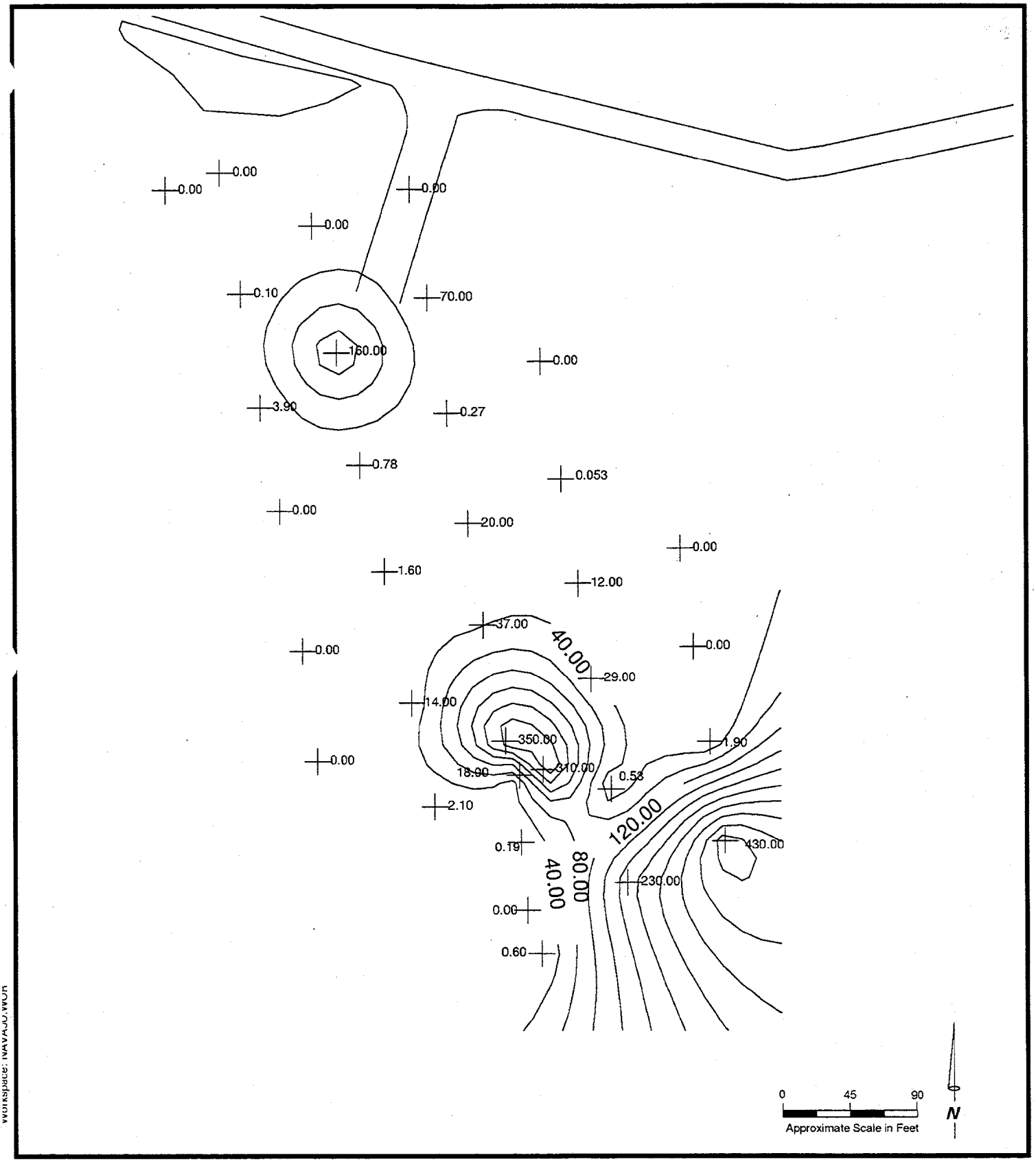
Benzo(a)pyrene in Surface Soils (<2 ft)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-5

Workspace: NAVAJO.WOR



Legend:

—11.70— All concentrations in parts per million (ppm)

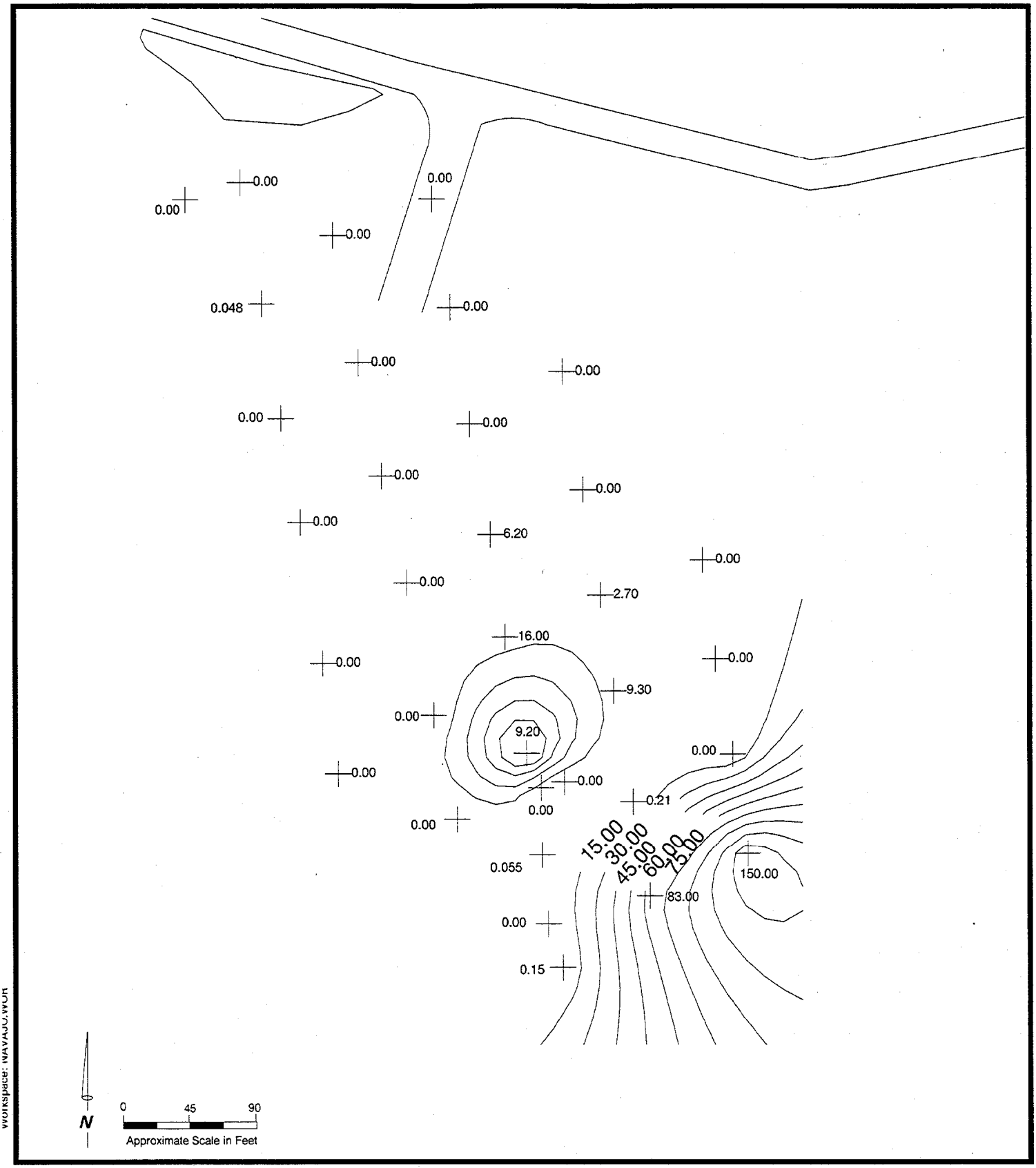
Former Construction Debris Landfill #5

Benzo(b)fluorathene in Surface Soils (<2 ft)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-6



Legend:

—1170— All concentrations in parts per million (ppm)

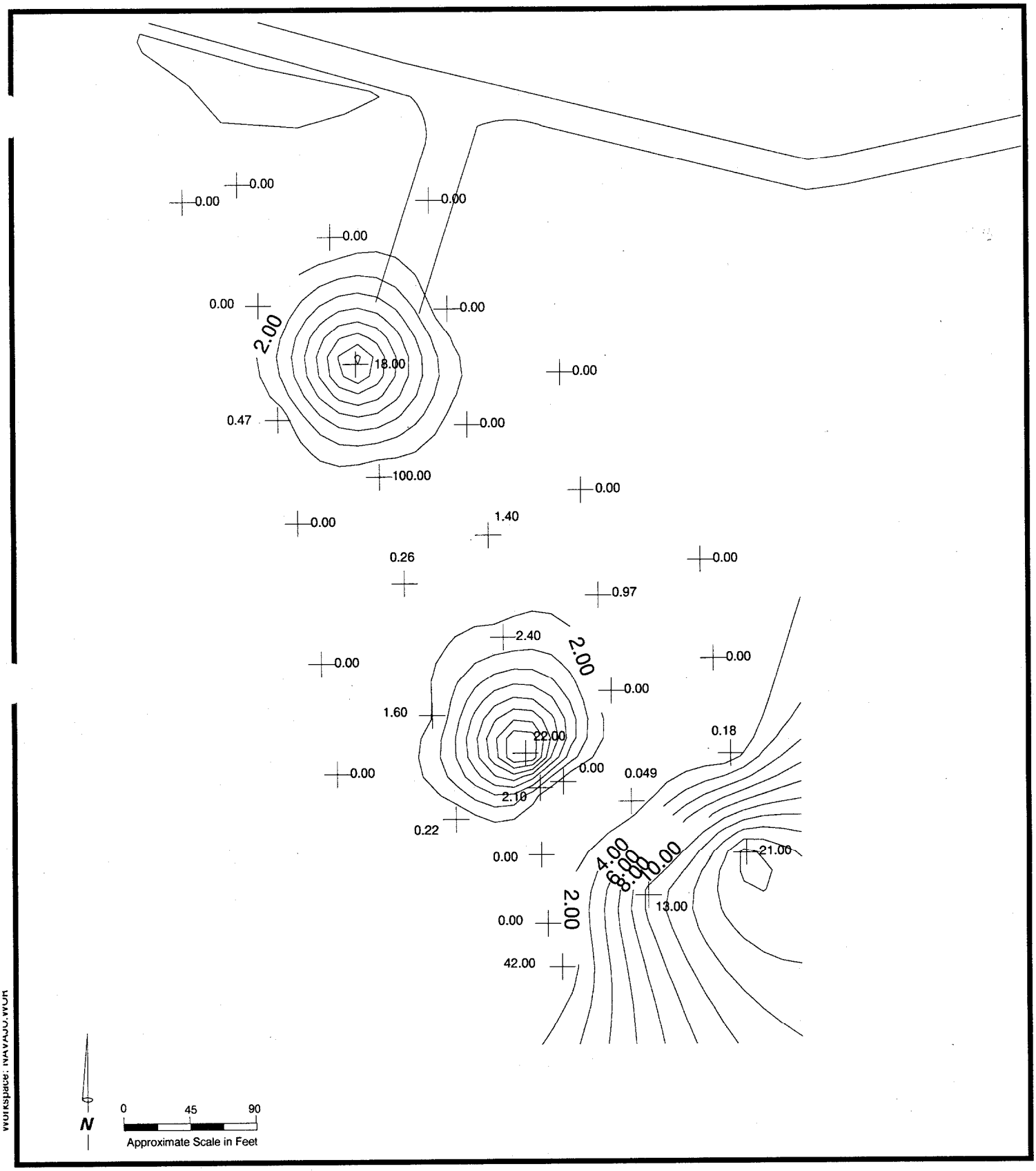
Former Construction Debris Landfill #5

Benzo(k)fluorenthene in Surface Soils (<2 ft)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-7



Former Construction Debris Landfill #5

Dibenz(a,h)anthracene in Surface Soils (<2 ft)

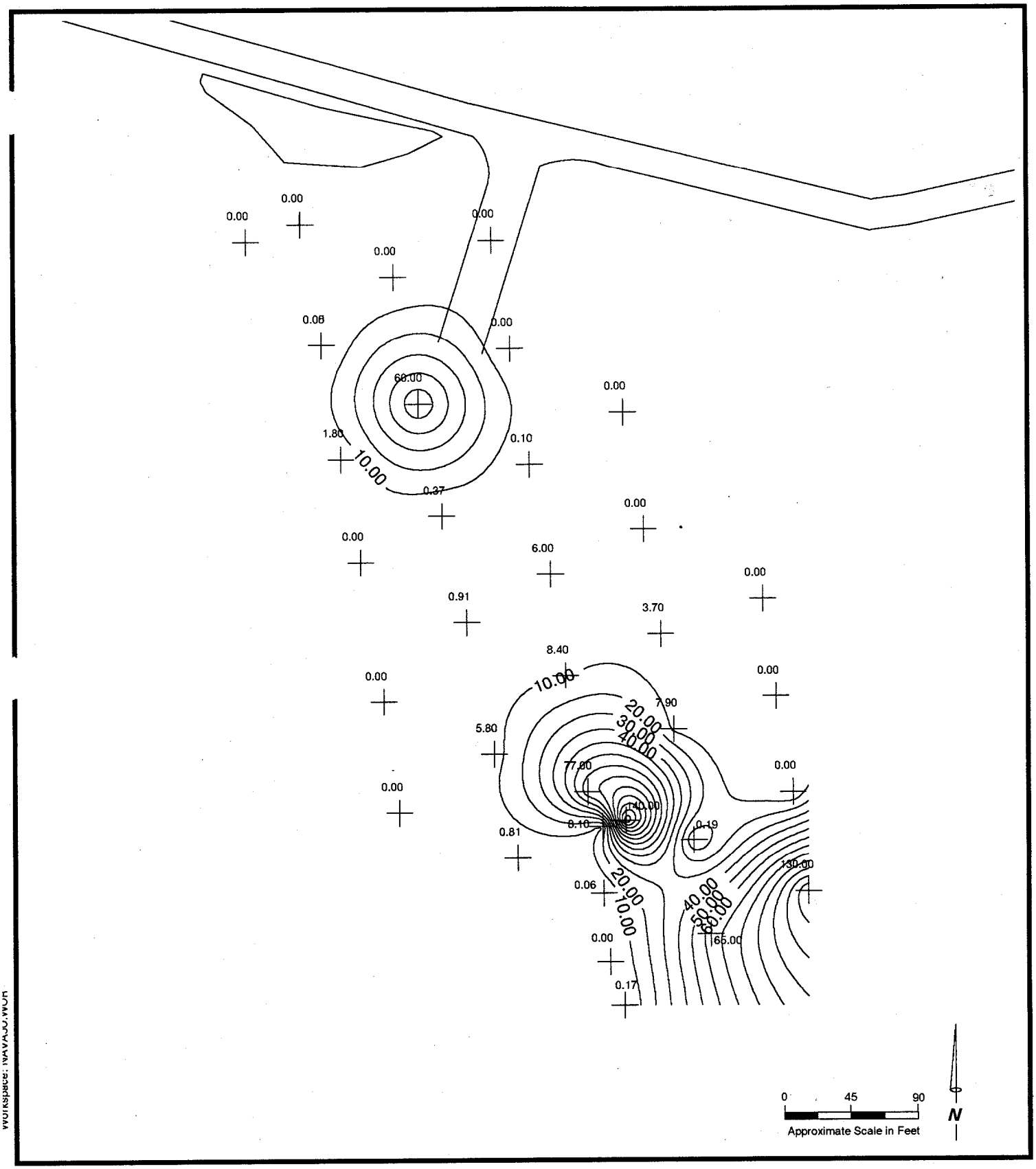
Legend:

–11.70– All concentrations in parts per million (ppm)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-8



Legend:

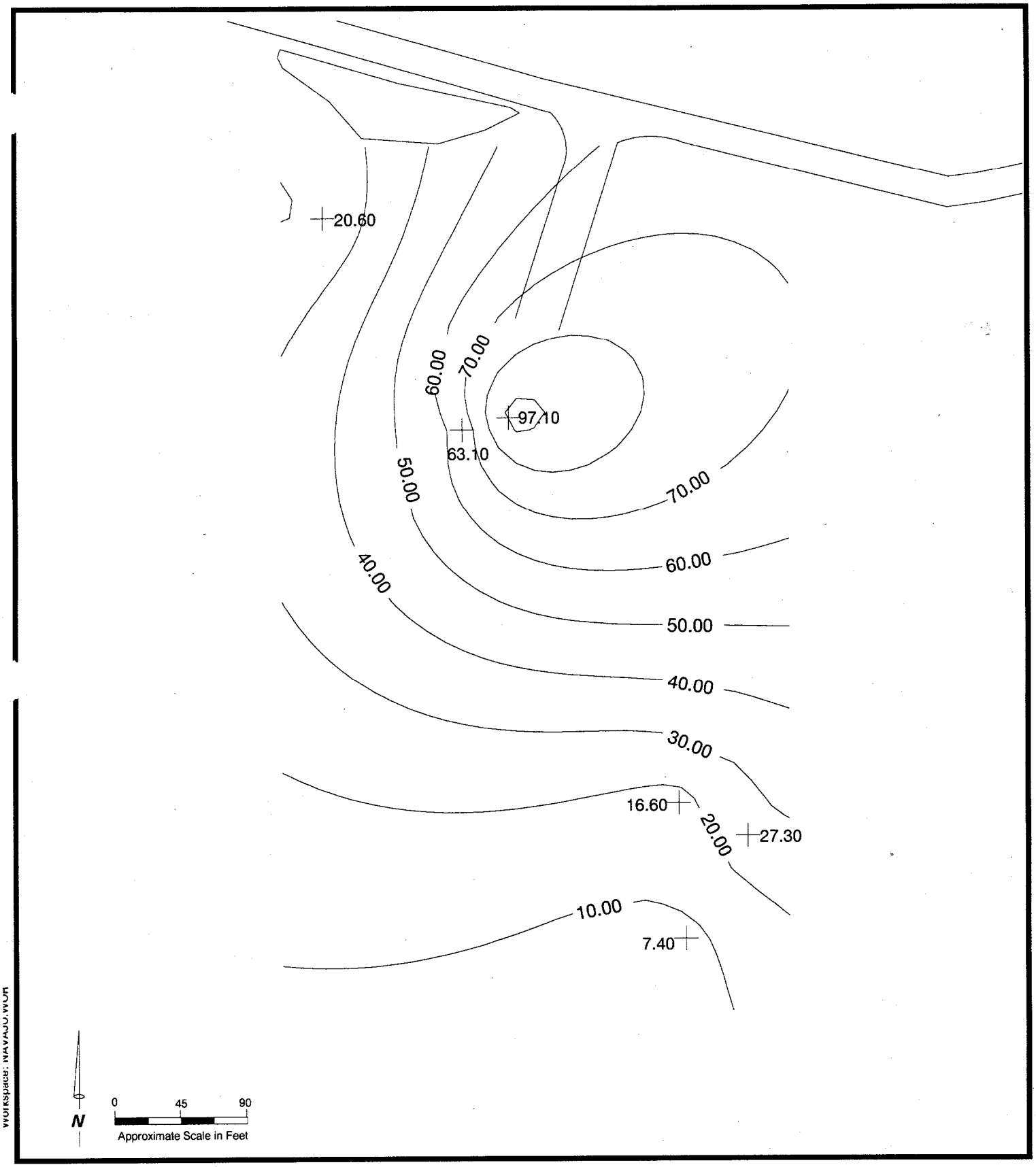
-1170- All concentrations in parts per million (ppm)

Former Construction Debris Landfill #5 Indeno (1,2,3-c,d)-pyrene Concentrations in Surface Soils (<2ft)

Camp Navajo, Bellemont, Arizona

Figure 4-9

Tetra Tech, Inc.



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Legend:

—1170— All concentrations in parts per million (ppm)

Former Construction Debris Landfill #5

Lead Concentrations in Subsurface Soil (2-10 ft)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-10

Table 4-4
Former Construction Debris Landfill #5 Pesticides and PCBs Results
(Detections Only)

Sample ID	Sample Date	Depth	4,4-DDE
		CRQL	0.0033
		Units	mg/kg
FCDL#5-SB03S-01	5/3/96	0.5	0.027

Analyses	48
Detections	1
Maximum Concentration	0.027
Arizona HBGL - Nonresidential	17
Arizona HBGL - Nonresidential Hits	0

Notes:
CRQL Contract required quantitation limits
< Less than the indicated detection limit
Data qualifiers are defined in Appendix H

Concentrations of petroleum hydrocarbons were identified in the subsurface soil samples collected at this site below ADEQ nonresidential HBGLs (Table 4-2). Concentrations of TRPH were detected in seven subsurface soil samples (up to 780 mg/kg). These concentrations are likely the result of disposal of petroleum based compounds in the area. The other detected petroleum hydrocarbon (unknown hydrocarbon quantified as Diesel Fuel #2) does not a have set HBGL but is detected at concentrations (up to 5,400 mg/kg) and is evaluated in Section 6.

Nineteen SVOCs were identified in subsurface soil samples collected at this site (Table 4-3). Ten SVOCs (napthalene, acenaphthlene, acenaphthylene, anthracene, benzo(k)fluoranthene, bis(2-ethyhexyl)phthalate, chrysene, di-n-octyl phthalate, fluoranthene, fluorene, and pyrene) were identified at concentrations below ADEQ nonresidential HBGLs and thus are not considered to be contaminants of concern. Five SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-c,d)-pyrene) were identified at concentrations above ADEQ nonresidential HBGLs. Concentrations of benzo(a)anthracene were detected above ADEQ nonresidential HBGLs (4.6 mg/kg) in seven surface soil samples (up to 350 mg/kg) (Figure 4-11). Concentrations of benzo(a)pyrene were detected above ADEQ nonresidential HBGLs (0.8 mg/kg) in nine subsurface soil samples (up to 290 mg/kg) (Figure 4-12). Concentrations of benzo(b)fluoranthene were detected above ADEQ nonresidential HBGLs (4.6 mg/kg) in seven subsurface soil samples (up to 510 mg/kg) (Figure 4-13). Concentrations of dibenz(a,h)anthracene were detected above ADEQ nonresidential HBGLs (0.46 mg/kg) in two subsurface soil samples (up to 46 mg/kg). Concentrations of indeno(1,2,3-c,d)-pyrene were detected above ADEQ nonresidential HBGLs (4.6 mg/kg) in seven subsurface soil samples (up to 190 mg/kg) (Figure 4-14). The other four detected SVOC (2-methylnaphthalene, benzo(g,h,I)perylene, dibenzofuran, and phenanthrene) do not have set HBGLs but were detected at concentrations (up to 26 mg/kg, 150 mg/kg, 48 mg/kg, and 550 mg/kg, respectively) and are evaluated in Section 6.

One VOC was identified in subsurface soil samples collected at this site (Table 4-5). Napthalene was identified at concentrations below ADEQ nonresidential HBGLS and thus is not considered to be a contaminant of concern.

4.4. QA/QC

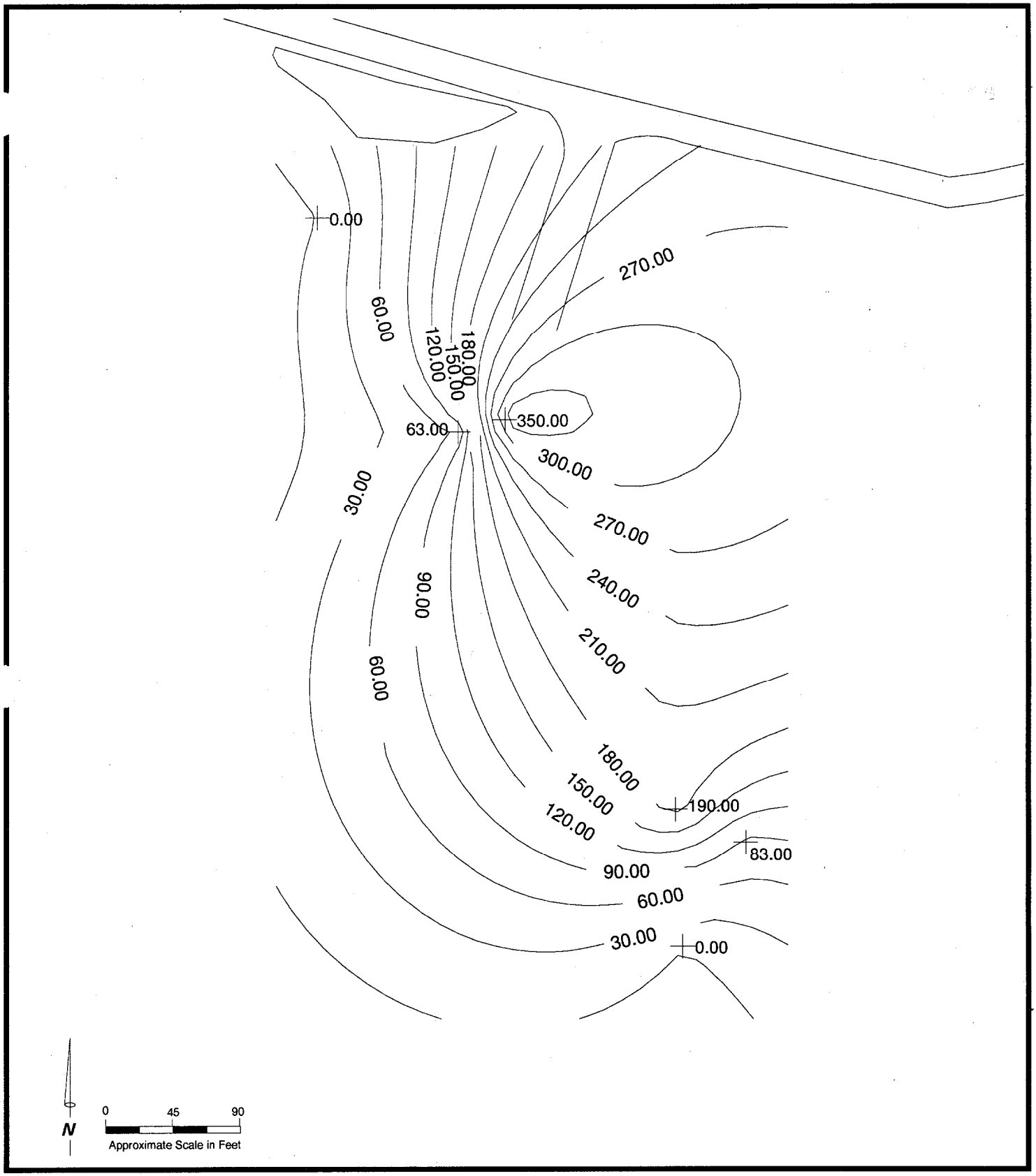
All samples were sent to Quanterra Incorporated (Quanterra) of Santa Ana, California for inorganic and organic parameter analyses. Temperature blanks for all coolers forwarded to the laboratory were within an acceptable range and all coolers arrived with custody seals intact. Applicable holding times were met for all analyses. A total of five field duplicate samples, including one soil boring (SB), one test pit (TP), and three surface soil (SS) samples, were collected at the site during the investigation as shown below. Validation of the data was conducted by Laboratory Data Consultants, Inc. (LDC) of Carlsbad, California.

Table 4-5
Former Construction Debris Landfill #5 Volatile Organic Compound Results
(Detections Only)

Sample ID	Sample Date	Depth	Naphthalene
		CRQL	0.005
		Units	mg/kg
FCDL#5-SB03S-03	5/3/96	5	0.042
FCDL#5-SB03S-04	5/3/96	10	0.047
FCDL#5-SB04S-03	5/3/96	5.5	0.044

Analyses	4
Detections	3
Maximum Concentration	0.047
Arizona HBGL - Nonresidential	16450
Arizona HBGL - Nonresidential Hits	0

Notes:
CRQL Contract required quantitation limits
< Less than the indicated detection limit
Data qualifiers are defined in Appendix G



Workspace: NAVAJO.WOR

Former Construction Debris Landfill #5

Benzo(a)anthracene in Subsurface Soils (2-10ft)

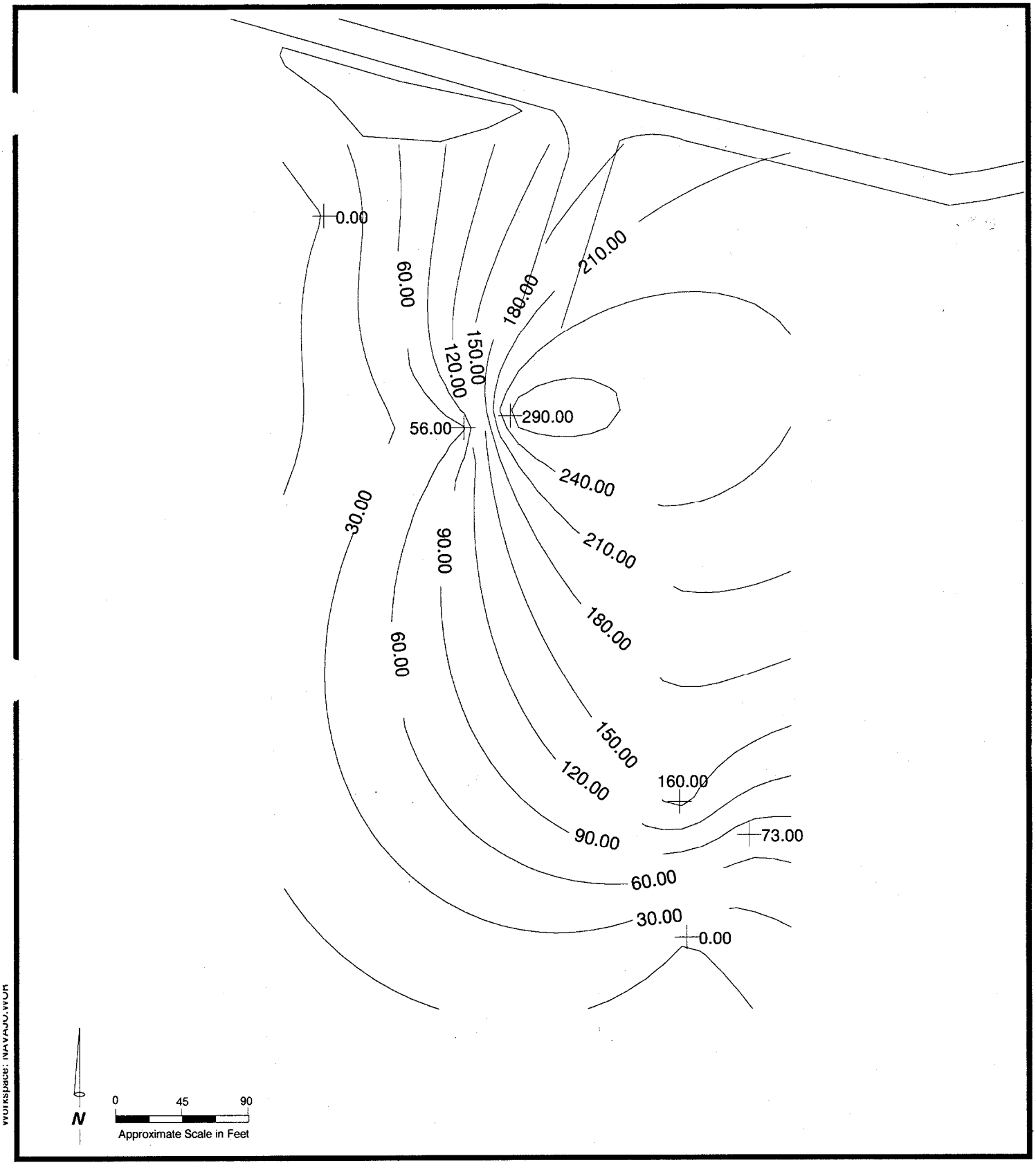
Legend:

—1170— All concentrations in parts per million (ppm)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-11



Former Construction Debris Landfill #5

Benzo(a)pyrene in Subsurface Soils (2-10 ft)

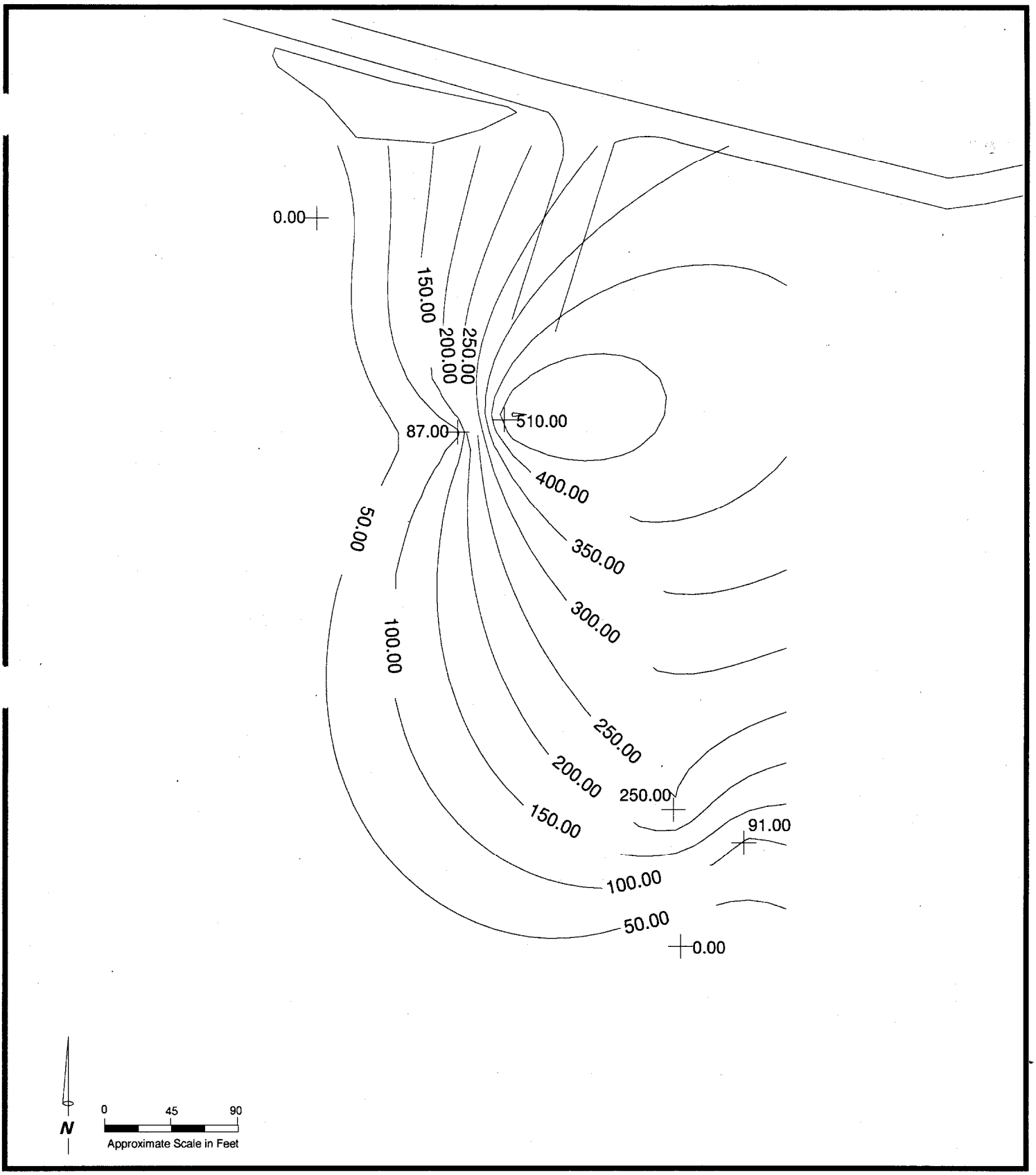
Legend:

—1170— All concentrations in parts per million (ppm)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-12



Former Construction Debris Landfill #5
Benzo(b)fluoranthene in Subsurface Soils (2-10 ft)

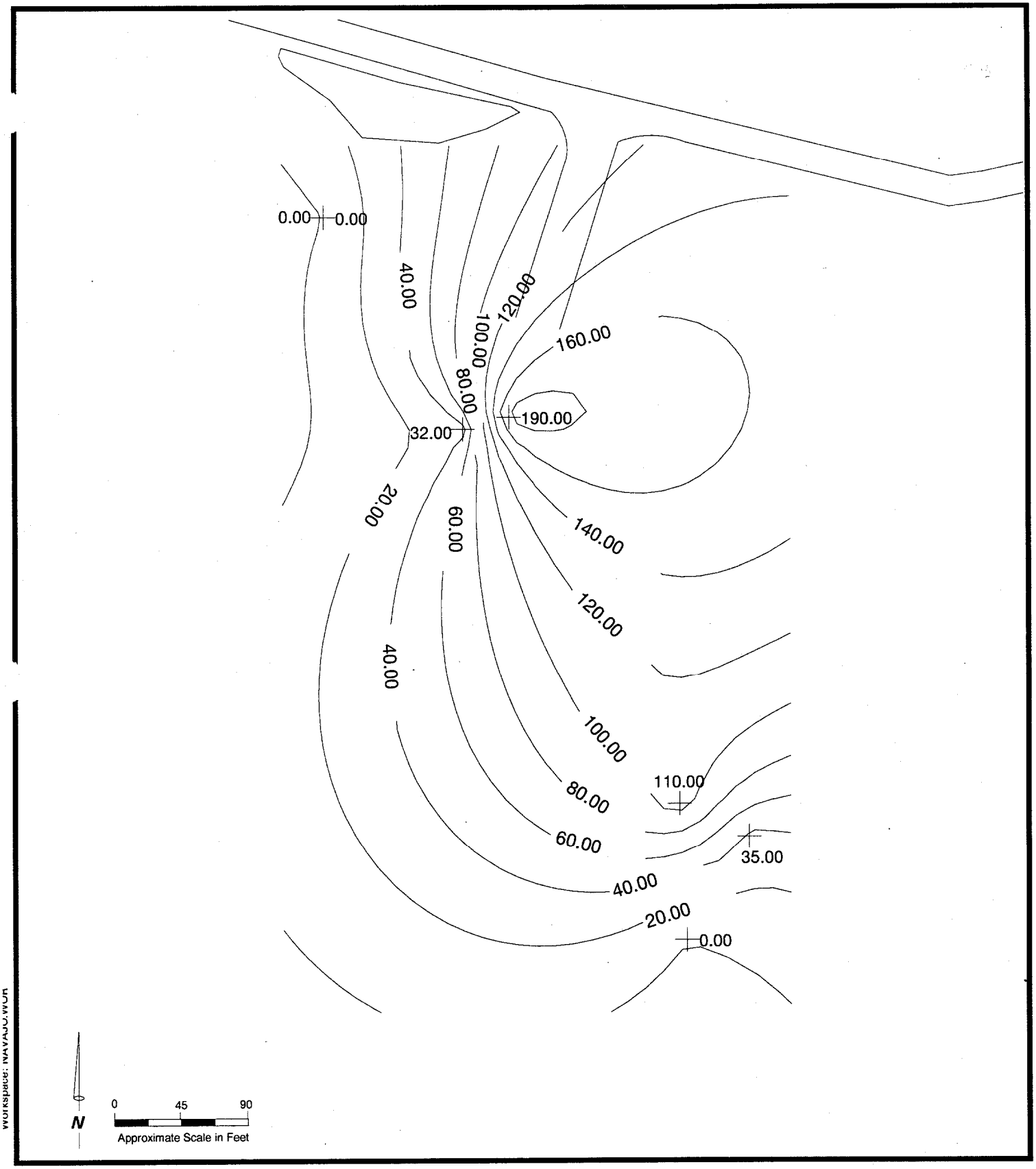
Legend:

—11.70— All concentrations in parts per million (ppm)

Tetra Tech, Inc.

Camp Navajo, Bellemont, Arizona

Figure 4-13



Workspace: NAVAJO.WOR

Legend:

—1170— All concentrations in parts per million (ppm)

Former Construction Debris Landfill #5 Indeno (1,2,3-c,d)-pyrene Concentrations in Subsurface Soils (2-10)

Camp Navajo, Bellemont, Arizona

Tetra Tech, Inc.

Figure 4-14

- FCDL#5-SB04S-03 is a blind duplicate of FCDL#5-SB03S-03;
- FCDL#5-TP03S-01 is a blind duplicate of FCDL#5-TP01S-02;
- FCDL#5-SS31S-01 is a blind duplicate of FCDL#5-SS02S-01;
- FCDL#5-SS32S-01 is a blind duplicate of FCDL#5-SS16S-01; and
- FCDL#5-SS33S-01 is a blind duplicate of FCDL#5-SS29S-01.

General validation findings applicable to both inorganic and organic data resulted in the qualification of select compound concentrations located above the method detection limit but below the respective sample quantitation limit prior to dilution and percent moisture corrections. These reported values are considered to be qualitatively acceptable but quantitatively estimated due to uncertainties in analytical precision near the limit of detection. According to USEPA guidelines, however, these low concentration data are considered suitable for risk evaluation applications with appropriate recognition of the noted quantitative uncertainties.

Volatile Organic Compounds by USEPA Method 8260A

Evaluation of field duplicate results for the VOC analyses indicated excellent qualitative and quantitative agreement between reported results. All analytical values reported for the field duplicate pairs were below the respective sample quantitation limits, and hence, all VOC duplicate results are considered acceptable. All other VOC data for submitted field samples were determined to be valid without qualification and are considered useable for all purposes.

Semivolatile Organic Compounds by USEPA Method 8270B

Evaluation of field duplicate results for the SVOC analyses indicated a general qualitative and quantitative agreement between reported values. Field duplicate precision was lowest for the set of polynuclear aromatic hydrocarbon (PAH) compounds detected in subsurface soils (i.e., SBs and TPs) at the site. Relative percent differences (RPDs) were all within QC acceptable criteria with exception of the analytes and field duplicate samples indicated below:

- Naphthalene, 2-methylnaphthalene, acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, phenanthrene, and pyrene in field duplicates FCDL#5-SB04S-03 and FCDL#5-SB03S-03;
- Anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, dibenzofuran, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, phenanthrene, and pyrene in field duplicates FCDL#5-TP03S-01 and FCDL#5-TP01S-02;
- Dibenzo(a,h)anthracene and dibenzofuran in field duplicates FCDL#5-SS32S-01 and FCDL#5-SS16S-01; and,

- Anthracene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and dibenzofuran in field duplicates FCDL#5-SS33S-01 and FCDL#5-SS29S-01.

These reported incidents of imprecision may be attributable to the high clay content and typical heterogeneity of subsurface soils in the Camp Navajo area. Although USEPA guidelines for organic data assessment do not require qualification of data on the basis of field duplicate precision alone, associated results for the indicated samples were flagged as quantitatively estimated. However, no restrictions on overall data useability for risk evaluation applications are expected.

Validation findings indicated potential quantitative uncertainties in nondetect SVOC results for numerous subsurface soil and water samples based on calibration parameters exceeding data assessment criteria. Analytical data for the associated samples (indicated in Appendix G) were flagged as quantitatively estimated. Affected SVOCs included the following:

- 1-Naphthylamine, 2,3,4,6-tetrachlorophenol, 2-naphthylamine, 3,3-dichlorobenzidine, 3-nitroaniline, 4-nitroaniline, 4-nitrophenol, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, and hexachlorocyclopentadiene in select SS samples;
- 2,4-Dinitrophenol in select SS and TP samples;
- 7,12-Dimethylbenz(a)anthracene in select SS and SB samples; and,
- a,a-Dimethylphenethylamine in select SS, TP, and SB samples.

Compounds indicated above have no calibration specifications required by the method and all associated matrix spike/matrix spike duplicate (MS/MSD) and laboratory control sample (LCS) recoveries for affected samples were within QC acceptance criteria. Moreover, the magnitude of any potential quantitative biases would likely be insignificant relative to the respective health-based limits established for each compound. Hence, applicable nondetect SVOC results are considered quantitatively estimated but useable for risk evaluation purposes according to USEPA guidelines.

In addition, validation indicated severe quantitative uncertainties with nondetect benzidine results for multiple SS samples based on a relative response factor (0.03) below minimum QC acceptable criteria for calibration sensitivity (0.05). Impacted sample data are indicated in Appendix G. Although the laboratory satisfied all operational calibration requirements for benzidine, associated results have been qualified as rejected based on USEPA data assessment criteria for SVOC analyses. Affected surface soil benzidine results are thus considered invalid and unuseable for all risk evaluation purposes.

All other SVOC data for submitted field samples were determined to be valid without qualification and are considered useable for all purposes.

Polychlorinated Biphenyls and Organochlorine Pesticides by USEPA Method 8081

Evaluation of field duplicate results for the PCB and organochlorine (OC) pesticide analyses indicated excellent qualitative and quantitative agreement between reported results. All analytical values reported for the field duplicate pairs were below the respective sample quantitation limits, and hence, all PCB and OC pesticide duplicate results are considered acceptable.

Validation findings suggested the potential for quantitative uncertainties in nondetect PCB and OC pesticide results for several SB samples based on surrogate spike recoveries outside of QC acceptance criteria. As indicated in Appendix G, PCB and OC pesticide results for the following field samples were flagged as quantitatively estimated: FCDL#5-SB01S-01, FCDL#5-SB01S-02, and FCDL#5-SB02S-03. In allowance of QC requirements, all PCB and OC pesticide analyses for the samples indicated above involved single surrogate violations concurrent with acceptable second surrogate recoveries. Reanalysis confirmed initial results and the deviations were attributed to sample matrix interferences by the laboratory. In addition, all PCB and OC pesticide results for these samples were determined to be nondetect and the affected samples were associated with acceptable MS/MSD and LCS recoveries. Consequently, all PCB and OC pesticide results flagged as quantitatively estimated are considered both valid and useable for risk evaluation purposes according to USEPA guidelines.

Results of the validation also indicated potential quantitative uncertainties in multiple nondetect beta-BHC results based on calibration parameters exceeding data assessment criteria. Impacted SS sample data are indicated in Appendix G. However, this compound has no calibration specifications required by the method and all MS/MSD and LCS recoveries for affected samples were within QC acceptance criteria. In addition, the magnitude of the potential bias expressed in beta-BHC calibration performance would likely be insignificant relative to the respective health-based limits established for this compound. Consequently, all beta-BHC results flagged as quantitatively estimated are considered both valid and useable for risk evaluation purposes according to USEPA guidelines.

Lastly, nondetect aldrin and heptachlor results for sample FCDL#5-SS16S-01 were also deemed to be quantitatively uncertain based on MS/MSD performance (129 percent for aldrin and 145 percent for heptachlor) exceeding the QC acceptance criteria for precision (35 percent). Analytical results (as indicated in Appendix G) for the noted field sample were flagged as quantitatively estimated. Moreover, all LCS recoveries were acceptable and the MS/MSD deviations were attributed to sample matrix interferences by the laboratory. According to USEPA guidelines, these data are both qualified as estimated and considered useable for risk evaluation applications.

All other PCB and OC pesticide data for submitted field samples were determined to be valid without qualification and are considered useable for all purposes.

Total Extractable Petroleum Hydrocarbons by ADHS Method BLS-191

Evaluation of field duplicate results for the total extractable petroleum hydrocarbon (TEPH) analyses indicated general quantitative agreement between reported results. All RPDs were within QC acceptance criteria with exception of results for the following field duplicate samples: FCDL#5-TP03S-01, FCDL#5-TP01S-02, FCDL#5SB04S03, and FCDL#5SB03S03. These reported incidents of imprecision may be attributable to the high clay content and typical heterogeneity of soils in the Camp Navajo area. Although USEPA guidelines for organic data assessment do not require qualification of data on the basis of field duplicate precision alone, TEPH results for the indicated samples were flagged as quantitatively estimated in Appendix G. However, no restrictions on data useability for risk evaluation applications are expected.

Validation findings suggested the potential for high biases in TEPH results for several surface and subsurface soil samples based on either MS or surrogate spike recoveries above the upper QC acceptance criteria for accuracy. As indicated in Appendix G, TEPH results for FCDL#5-SS11S-01, FCDL#5-SS16S-01, FCDL#5-SS32S-01, and FCDL#5-TP02S-02 were flagged as quantitatively estimated with a probable high bias. These deviations were attributed to sample matrix interferences by the laboratory and the affected samples were all associated with acceptable LCS recoveries. However, the potential high biases expressed in TEPH MS and surrogate spike performances would not be expected to impact sample concentrations quantitated significantly below health-based levels of concern. According to USEPA guidelines, these data are both qualified as estimated and considered useable for risk evaluation applications.

Validation of TEPH results also indicated qualitative uncertainties associated with identification of the reported hydrocarbon species. Quantification of reported TEPH results was accomplished using diesel fuel reference standards since chromatographic profiles observed in sample analyses were not consistent with the patterns obtained from known hydrocarbon reference standards. Due to both the default application of diesel fuel reference factors and the high degree of uncertainty in the petroleum hydrocarbon identifications, the resulting TEPH values are considered quantitatively estimated and reported as "unknown hydrocarbons."

All other TEPH data for submitted samples were determined to be valid without qualification and are considered useable for all purposes.

Total Recoverable Petroleum Hydrocarbons by ADHS Method BLS-418.1AZ

Evaluation of field duplicate results for the TRPH analyses indicated general quantitative agreement between reported results. All RPDs were within QC acceptance criteria with exception of the field duplicate samples: FCDL#5-TP03S-01 and FCDL#5-TP01S-02.

This reported incidents of imprecision may be attributable to the high clay content and typical heterogeneity of soils in the Camp Navajo area. Although USEPA guidelines for organic data assessment do not require qualification of data on the basis of field

duplicate precision alone, TRPH results for the indicated samples were flagged as quantitatively estimated in Appendix G. However, no restrictions on data useability for risk evaluation applications are expected.

Validation findings suggested the potential for low biases in TRPH results for multiple subsurface soil samples based on an MS recovery (7 percent) significantly below the lower QC acceptance criteria for accuracy (65 percent). Reanalysis confirmed the initial results and TRPH data for the associated field samples indicated in Appendix G were flagged as quantitatively estimated with a probable low bias. Moreover, all LCS recoveries were acceptable and the MS deviation was attributed to sample matrix interferences by the laboratory. In addition, the nondetect TRPH result for sample FCDL#5-SS22S-01 was qualified as rejected due to this potential low bias. According to USEPA guidelines, these J-flagged data are considered useable for risk evaluation applications with an appropriate recognition of the noted quantitative uncertainties.

All other TRPH data for submitted samples were determined to be valid without qualification and are considered useable for all purposes.

Metals by USEPA Methods 6010A and 7471A

Evaluation of field duplicate results for the metals analyses indicated excellent qualitative and quantitative agreement between reported results for the ten target elements. All RPDs were within QC criteria with exception of barium results for field duplicates FCDL#5-SB04S-03 and FCDL#5-SB03S-03. Barium concentrations reported for these samples were two to three orders of magnitude greater than the respective sample quantitation limit. In addition, this incident of imprecision may be attributable to the high clay content and typical heterogeneity of soils in the Camp Navajo area. Although USEPA guidelines for inorganic data assessment do not require qualification of data on the basis of field duplicate precision alone, associated barium results for the indicated samples were flagged as quantitatively estimated in Appendix G. However, no restrictions on data useability for risk evaluation applications are expected.

Validation findings suggested the potential for low biases in barium and lead results for multiple SS samples based on MS recoveries (32 percent for barium and 19 percent for lead) significantly below the lower QC acceptance criteria for accuracy (75 percent). Reanalysis confirmed the initial results and affected metals data for the associated field samples indicated in Appendix G were flagged as quantitatively estimated with a probable low bias. Moreover, all LCS recoveries were acceptable and the MS deviations were attributed to sample matrix interferences by the laboratory. According to USEPA guidelines, data are considered useable for risk evaluation applications with an appropriate recognition of the noted quantitative uncertainties.

Validation findings also indicated the potential for quantitative uncertainties in cadmium and chromium results for multiple surface soil samples based on duplicate sample performance (0.46 mg/kg for cadmium and 9.2 mg/kg for chromium) exceeding the QC acceptance criteria for precision ($\pm$0.2 mg/kg and $\pm$0.5 mg/kg,

respectively). Analytical results for the associated field samples indicated in Appendix G were flagged as quantitatively estimated. These deviations were attributed to sample matrix interferences by the laboratory. However, all affected samples were associated with acceptable MS and LCS recoveries. According to USEPA guidelines, these data are both qualified as estimated and are considered useable for risk evaluation applications.

All other metals data for submitted samples were determined to be valid without qualification and are considered useable for all purposes.

SECTION 5
CONTAMINANT FATE AND TRANSPORT

Section 4 discussed the potential contaminants of concern for the former construction debris landfill #5 site soils. The following contaminants of concern were identified for surface and subsurface soils:

- Surface soils — lead, benzo(b)fluoranthene, benzo(a)pyrene, benzo(a)anthracene, benzo(k)fluoranthene, indeno (1,2,3-c,d) pyrene, 2-methyl naphthalene, benzo(g,h,i)perylene, dibenzofuran, and total petroleum hydrocarbons (TPH); and
- Subsurface soils — benzo(b)fluoranthene, benzo(a)pyrene, benzo(a)anthracene, benzo(k)fluoranthene, indeno (1,2,3-c,d) pyrene, 2-methyl naphthalene, benzo(g,h,i)perylene, and dibenzofuran.

This section provides a summary of the potential routes of migration, ability to persist in the environment, and relative migration potential for these contaminants of concern.

5.1. POTENTIAL ROUTES OF MIGRATION

The same potential routes of migration exist for organic and inorganic compounds in soils at this site. The contaminants can become dissolved in infiltrating precipitation and be transported vertically downward. This process can be quite rapid where near-vertical open channels, such as solution planes or fractures, exist. Overland routes of migration include transport by wind as particulates, hydraulic transport in a surface water body, or excavation and transport by human beings or animals.

5.2. CONTAMINANT PERSISTENCE

As an element, lead cannot be further degraded. In subsurface environments elemental metals often form silicate, carbonate, and sulfate precipitates with varying solubility under specific Eh-pH conditions.

Benzo(b)fluoranthene, benzo(a)pyrene, benzo(a)anthracene, benzo(k)fluoranthene, 2-methyl naphthalene, benzo(g,h,i)perylene, and dibenzofuran are all PAHs, which are

formed by the incomplete burning of organic compounds, primarily oil, coal, and gas. Microbial metabolism is the primary mechanism for degradation of PAHs in soils. The rate and extent of degradation are influenced by factors such as temperature, pH, soil contamination, moisture, nutrients, soil type, and the presence of cometabolites (Sims and Overcash 1983). Metabolism of PAHs by bacteria and fungi includes a series of breakdown compounds resulting in the formation of acetaldehyde, and acetic, fumaric, pyruvic, and succinic acids. The rate of biodegradation can be influenced by the degree of soil contamination; in general, more highly contaminated soils retard the process. This may be in part due to the fact that other contaminants are toxic to microorganisms.

In a saturated environment PAHs can be significantly degraded under aerobic conditions, however under anaerobic conditions the degradation rate is extremely slow (Neff 1979). Microorganisms in stored aerobic ground water samples completely degraded PAHs in three days. However, there was no indication of degradation in an anaerobic aquifer (Ogawa et al. 1982).

5.3. CONTAMINANT MIGRATION

The rate of migration of metals in saturated and unsaturated soils is strongly influenced by adsorption processes, particularly where cationic metals are sorbed onto soil particle imperfections with negatively electrical charges. The cation exchange capacity (CEC) represents the total number of negatively charged sites in a given amount of solid at which adsorption and desorption can occur. Clays, such as those present at the former construction debris landfill #5 commonly have high CECs. It is expected that adsorption will severely retard the movement of metal contaminants. In addition, in the pH ranges common to ground water flow, systems transport of metals is limited by low solubility.

Organic compounds also are subject to adsorption. A few key factors allow the estimation of the relative mobility of the contaminants. The polar-ionic character of the compound affects sorption in clayey sediments the more polar compounds will be adsorbed at a higher rate. The octanol water coefficient (K_{ow}) represents the distribution of a chemical between octanol and water in contact at equilibrium conditions. In general, K_{ow} is a measure of the hydrophobicity of an organic compound in water. The more hydrophobic, the higher the K_{ow}. Thus the compound would more likely to partition onto soils and will have a lower solubility in water.

The soil organic carbon/water partition coefficient (K_{oc}), is defined as the adsorbed chemical per gram of organic carbon, divided by the micrograms of chemical per milliliter of solution. It is based on the assumption that the soil's organic content is the only determinant of the sorption rate of a compound from water to soil. The TOC fraction for the former construction debris landfill #5 site ranges from 1.2 to 3.2 percent indicating that the adsorption rate is low and the mobility of the contaminants will be relatively high.

The properties of organic compounds observed above nonresidential HBLGs at the former construction debris landfill #5 site are given on Table 5-1. The K_{ow} and K_{oc} values are relatively high, indicating relatively low mobility in ground water and their tendency to sorb onto organic carbon. In addition, the low solubilities would further inhibit the rate of transport in a ground water system. For these reasons, the PAH contaminants of concern are not expected to be significantly mobile.

Table 5-1
Selected Properties of Polycyclic Aromatic Hydrocarbon Compounds

Property	dibenz(a,h) anthracene	benzo(b) fluoranthene	benzo(k) fluoranthene	benzo(a) anthracene	benzo(a) pyrene
Density (g/cm^3)	1.28	no data found	no data found	1.27	1.35
Water solubility (mg/L @ 25°C)	0.0005	0.0012	0.00055	0.0094	0.003
log K_{OC}	6.22	5.74	6.64	6.14	5.60-6.29
log K_{OW}	6.36	6.57	6.85	5.61	5.99

Source: Montgomery and Welkon 1989.

SECTION 6
RISK SCREENING

Based on documented uses of land surrounding the site, current activities and activity patterns at the site are considered primarily commercial/industrial. However, because the site is located in an area also used part-time for military training exercises, and since this area is subject to lower security restrictions than other portions of the base, land use of the site is also assumed to be part-time recreational for purposes of this risk screening. Previous operations at the site have indicated inorganic metal compounds, VOCs, SVOCs, OC pesticides, PCBs, and petroleum hydrocarbons to be the principal chemicals of concern (COCs) posing a potential exposure risk to recreators and/or commercial workers involved in part-time activities on-site.

Inorganic Contaminants

Based on maximum reported soil concentrations, the only metals with detectable levels greater than the corresponding HBGLs developed by the Arizona Department of Health Services (ADHS) for ADEQ using nonresidential exposure assumptions were arsenic, beryllium and lead. Potassium was eliminated from the risk screening based on its relative low toxicity, because it is a micronutrient, and because its maximum reported concentration was less than the USEPA ceiling limit of $1X10^{+5}$ mg/kg reserved for "less toxic inorganic contaminants."

Lead was observed only once (2,990 mg/kg) during the 48 soil analyses at a concentration above the respective nonresidential HBGL (1,400 mg/kg) and the USEPA Region IX Preliminary Remediation Goal (PRG) (1,000 mg/kg) established for industrial soils, a frequency of detection considerably lower than the USEPA recommended action criteria of 5 percent. In addition, the sole elevated lead concentration may be attributed to a discrete piece of construction debris contained in the collected surface sample, suggesting that the lead may not be bioavailable in particulate form at health-adverse concentrations. Excluding this value from statistical consideration, the range of detections observed for lead at the site was 5.3 mg/kg to 316 mg/kg, with no lead concentration greater than the nonresidential HBGL or USEPA PRG in any surface or subsurface sample. Therefore, lead levels reported for

the site are considered to reside within an acceptable range of health-based standards relevant to short-term exposure recreation and commercial/industrial activities.

Maximum concentrations for arsenic (10.7 mg/kg) and beryllium (2.0 mg/kg) were also indicated to exceed current HBGLs for nonresidential soils (3.82 mg/kg and 1.34 mg/kg, respectively) and current USEPA PRGs for industrial soils (2.4 mg/kg and 1.1 mg/kg, respectively). However, these arsenic and beryllium levels were below naturally occurring (background) levels recorded for the geographical area encompassing the Camp Navajo base. Background concentration levels of 44 mg/kg for arsenic and 5.0 mg/kg for beryllium (Tetra Tech 1997) indicate that reported soil results are consistent with regional conditions. According to both USEPA and USACE guidelines, if inorganic chemicals are detected at the site at naturally occurring concentrations, they may be eliminated from the corresponding risk evaluation.

Organic Contaminants

Laboratory results for the organic COCs show that maximum soil concentrations are below current non-residential HBGLs in all situations where HBGLs have been established, with the exception of semivolatile PAHs and non-speciated petroleum hydrocarbons. VOCs, OC pesticides and PCBs were excluded as COCs since they were not present at concentrations high enough to pose a potential exposure or health threat during part-time, on-site recreational and commercial/industrial operations using ADEQ and USEPA guidelines.

Seven PAHs, including benzo(a)pyrene and dibenz(a,h)anthracene, were detected in soils at concentrations significantly greater than both the corresponding HBGLs developed for nonresidential soils and the PRGs established by USEPA for industrial soils. Three other PAHs without established HBGLs or PRGs were also detected at elevated levels in surface and subsurface soils at the site. All of these compounds had relatively high frequencies of detection with maximum reported concentrations two to three orders of magnitude higher than their respective health-based standards. Since benzo(a)pyrene and dibenz(a,h)anthracene are the standards for comparative toxicity among PAHs, according to USEPA relative-risk guidance, it cannot be concluded that detected PAH levels present an acceptable exposure risk to on-site recreational and commercial/industrial activities.

In addition, the seven PAHs detected above the nonresidential HBGLs are categorized as potential carcinogens by the USEPA. Current USEPA guidance on the characterization of risk from short-term exposures to carcinogens indicates that any exposure, regardless of duration, may result in carcinogenic risk. Likewise, USEPA risk assessment guidelines also require the summation of chemical-specific cancer risks when multiple carcinogenic COCs have been detected. Consequently, from a quantitative risk screening perspective using USEPA carcinogenic "total risk" criteria, reported PAH concentrations are not considered to reside within an acceptable cumulative risk range under expected site use and exposure conditions.

Although there is no current nonresidential HBGL developed for dibenzofuran, its maximum concentration (81 mg/kg) reported for soils on-site was found to be less than the corresponding PRG (140 mg/kg) established by USEPA for industrial soils. Therefore, this compound is not indicated to be present at concentrations high enough to pose a potential exposure or health threat during on-site commercial/industrial activities using USEPA Region IX guidelines.

Petroleum hydrocarbon data reported for surface and subsurface soil samples revealed generalized, low-level concentrations consistent with the historical waste disposal practices at the site. Only one TRPH concentration (7,100 mg/kg) among the 48 analyses was reported above the respective residential HBGL (7,000 mg/kg). For the TEPH analyses, a method without established HBGLs by the state of Arizona, the maximum reported soil concentration was also 7,100 mg/kg. All TEPH results greater than the respective sample quantitation limit were reported by the laboratory as "unknown hydrocarbons" and no soil samples collected at the site had detectable diesel fuel concentrations. Since USEPA and USACE guidelines require the use of chemical-specific data in deriving estimates of potential exposure risks, TRPH and TEPH data from the site present qualitative evidence of low-level hydrocarbon contamination at concentrations not expected to be health-adverse. As such, identified chemical constituents of petroleum products detected the site, namely the PAHs indicated above, remain the primary toxicological concern with regards to on-site recreational and commercial/industrial activities.

SECTION 7
SUMMARY AND CONCLUSIONS

7.1. SUMMARY

Concentrations of petroleum hydrocarbons and PAHs have been identified above nonresidential HBGLs in 24 of 48 soil samples collected at the site. Identified contaminants of concern include benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, indeno (1,2,3-c,d) pyrene, and dibenz(a,h)anthracene. Soil contamination was found to extend from the surface to the maximum extent of investigation at the contact with the underlying basalt.

The highest of the PAHs detected were generally associated with subsurface samples collected from the test pits and soil boring. This suggests that the material was disposed to trenches/pits and then backfilled with cleaner soil. PAH contaminants appear to be co-located in the same samples suggesting that all PAH contaminants are from the same source.

Risk evaluation results indicate that the maximum reported concentrations of identified contaminants other than PAHs in surface and subsurface soils at the site would not be expected to result in adverse health effects for part-time recreational and commercial/industrial land use. Because many of the PAHs detected are classified as potential carcinogens and are usually subject to quantitative risk models to determine exact exposure conditions when detected at elevated levels, physical access to the site should be restricted and general efforts taken to reduce the potential and duration of any recreational or occupational exposure. Activities performed on-site that interface with surface and subsurface soils should employ dermal and inhalation protection appropriate to the task. Moreover, long-range concerns and mitigating measures regarding PAH and related petroleum hydrocarbon contamination at the site should be addressed in the site-wide risk evaluation report. These determinations incorporate the most current ADEQ, USEPA, and USACE "acceptable" target risk criteria into its approach and are intended to be a "health-conservative" evaluation of potential risk and hazard.

7.2. CONCLUSIONS

All data collected during this investigation meet acceptable QA/QC standards and are considered to be representative of site conditions. Therefore, based on the presence and extent of PAH contamination in the soils at the site, further action is warranted. Tetra Tech recommends action to reduce the risks of human and ecological risks with the contaminated soils. Further characterization should be conducted to determine the full extent of the PAH and TRPH contamination to the south, east, and vertically.

The most significant contamination appears to be associated with the subsurface soils in the area of the basalt depression. If this is true, the extent of the contamination is unlikely to extend much beyond the current limits of the investigation because the depression doesn't extend beyond the are. Additional characterization also should be done to determine if soil contamination has extended to ground water. Access to this site should be restricted. The objective was not met in this investigation because basalt was encountered at between five and ten feet bgs.

SECTION 8
REFERENCES

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APPENDIX A

PHOTO DOCUMENTATION

Former Construction Debris Landfill #5 Photos

47-1 Trenching @ FCDL #5, S, 4/23/96, by Dave Wrzosek

47-2 Trenching @ FCDL #5, E, 4/23/96, by Dave Wrzosek

47-3 Basalt bedrock approx. 4 ft. down @ FCDL #5-TP01, N/A, 4/23/96, by Dave Wrzosek

47-4 Excavated material with broken roofing shingles, N, 4/23/96, by Dave Wrzosek

47-5 Excavated material with broken roofing shingles, S, 4/23/96, by Dave Wrzosek

47-6 Tar blob dug up @ FCDL #5-TP01, S, 4/23/96, by Dave Wrzosek

47-7 North side of trench, mid mound showing tar and roofing material, N, 4/23/96, by Dave Wrzosek

47-8 North side of trench, mid mound showing tar and roofing material, N, 4/23/96, by Dave Wrzosek

47-9 Excavator nearing the end of TP01 @ FCDL #5, E, 4/23/96, by Dave Wrzosek

47-10 Small amount of metal amongst the excavated material, E, 4/23/96, by Dave Wrzosek

47-11 T. Wilson from Bohunk digging TP02 @ FCDL #5 (Level C), S, 4/23/96, by Dave Wrzosek

47-12 Excavated material from TP02 @ FCDL #5, W, 4/23/96, by Dave Wrzosek

47-13 FCDL # TP02 55 ft. into the excavation, S, 4/23/96, by Dave Wrzosek

47-14 Surface debris @ FCDL #5, W, 4/23/96, by Dave Wrzosek

47-15 Soil borings @ TP02 FCDL #5, W, 4/23/96, by Dave Wrzosek

47-16 Excavated debris and soil from approx. 90 ft. from North end of TP02 @ FCDL #5, S, 4/23/96, by Dave Wrzosek

47-17 Surface debris in area of TP02 @ FCDL #5, S, 4/23/96, by Dave Wrzosek

47-18 Finished trench TP02 @ FCDL #5, S, 4/23/96, by Dave Wrzosek

47-19 East wall of TP02 FCDL #5, E, 4/23/96, by Dave Wrzosek

47-20 East wall of TP02 FCDL #5 all native, no debris, E, 4/23/96, by Dave Wrzosek

47-21 Surficial debris adjacent to TP02 @ FCDL #5, W, 4/23/96, by Dave Wrzosek

47-22 TP01 backfilled, W, 4/23/96, by Dave Wrzosek

47-23 TP02 backfilled, S, 4/23/96, by Dave Wrzosek

48-15 Don and Gary drilling @ FCDL #5 in level C by Dave Wrzosek


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APPENDIX B

FIELD NOTES

APPENDIX C

STANDARD OPERATING PROCEDURES

SECTION 1
PASSIVE SOIL GAS SURVEY

1.1 PURPOSE

The purpose of this standard operating procedure (SOP) is to describe the considerations and procedures for conducting a passive soil gas survey. Soil gas will be used as a reconnaissance screening tool to identify volatile and semivolatile contaminants in subsurface soils. Such contaminants migrate at different rates through porous media depending on the permeability of the media, the concentration gradient, and the moisture content. Soil gas can be used to determine the presence and distribution of volatile and semivolatile contaminants. Relatively high concentrations of volatile constituents in the soil atmosphere does not necessarily indicate the presence of similarly high levels of contaminants in the liquid or solid phase, however.

1.2 TECHNIQUE - DESCRIPTION

Soil-gas samplers will be located as described in the site-specific sampling plans. Both deterministic and probabilistic sampling methods will be employed, depending on site-specific conditions and objectives. Probabilistic sampling will be used in areas in which there is little or no information to inform the sampling effort and where potential sampling locations are not constrained. Probabilistic sampling will be based on systematic sampling of a hexagonal grid. The sampling grid may be stratified to focus on certain portions of the site where greater detail is needed. Deterministic sampling will be carried out at sites where there is enough information available to limit the soil gas study to selected portions of the site or where site features limit the choice of sampling locations. For example, soil gas surveys around buildings may be confined to locations between the building perimeter and the adjacent railroad track in order to preferentially sample the area where most spills are likely to have occurred.

1.2.1 Description of Methods

The "passive" soil gas method refers to a sorbent-filled sampler that is installed in the shallow subsurface for a specified time to allow the surrounding vapor-filled atmosphere to migrate into the sampler and be partitioned to the sorbent. The sampler does not rely on pumping soil vapor into the sampler or through a canister. The

sampler is made of a semi-permeable membrane that repels water but allows vapor molecules to enter by diffusion. The sorbent inside the sampler has a high solid-vapor partitioning coefficient and a high sorption capacity such that the concentration gradient is in the direction of the screening module.

The depth of installation of soil gas probes will be three feet below the ground surface to identify evidence of contaminants that originated primarily from surface spills. Deeper installations may be justified if the source of the contamination is below a capping layer that would hinder detection of the contaminant at the three-foot depth.

As vapor diffuses in the soil atmosphere, it enters the sampler and sorbs strongly to the sorbent. The concentration of contaminant molecules in the soil atmosphere is a function of the volatility of the compound, the concentration of the compound in the liquid or solid phase, temperature, humidity, and, to some extent, the concentrations of other compounds.

The sorbent mixture absorbs almost all volatile and semivolatile organic compounds. If the compounds are present in the liquid or solid phase, then equilibrium partitioning between phases ensures that at least some contaminant molecules will be present in the soil atmosphere and will inevitably migrate toward, and be trapped on, the sorbent in the sampler.

1.3 PROCEDURES

1.3.1 Underground Utility Clearance

Prior to selecting sample locations, an underground utility search is recommended. The local utility companies can be contacted and requested to mark the locations of their underground lines. Sampling plans can then be drawn up accordingly. Each sample location should also be screened with a metal detector or magnetometer to verify that no underground pipes or drums exist.

1.3.2 Method and Equipment

GORE-SORBER[sm]

GORE-SORBER[sm] screening modules will be used for soil gas testing. The screening modules are made of a semi-permeable membrane that repels water but allows vapor molecules to enter by diffusion. The sorbent inside the sampler has a high solid-vapor partitioning coefficient and a high sorption capacity such that the concentration gradient is in the direction of the screening module. The sampling person marks a location on the ground using a flag or spray paint and uses a slide hammer and a tile probe or an electric drill to make a one-inch hole to a depth of two to three feet. While wearing clean nitrile gloves, the sampler removes the module from its sealed container. The module is then lowered into the hole with a stainless steel rod inserted into the pocket in the bottom of the module. Replicate sorbers are housed in the bottom of an length of sealed PTFE tubing. The module is placed to the bottom of the hole. When the module is inserted the full depth of the hole, it is pressed against the side of the

hole and the rod twisted until the rod is freed and pulled out. A cork attached to the top of the module is inserted into the hole to prevent rain or atmospheric gases from entering the module and to facilitate retrieval. The auger and stainless steel rod are decontaminated as described in the Decontamination of Field Equipment SOP.

The modules are left in the ground for 14 days and then are retrieved for analysis.

The outer length of tubing is used to insert and retrieve the module. To retrieve the module, the stopper and module are pulled out of the ground. The stopper then is cut off and discarded.

The sampling person records the following information in the field logbook:

- The unique serial number on the top of the sorber container and on a metal identification tag connected to the screening module;
- The depth of the installation;
- The location identification number;
- The date and time, remarks or observations; and
- The sampler's initials.

The sampling person fills out a field tracking form when the sample is collected. The sorber container tag number, the location number, the depth, date and time of collection, number of replicates, remarks, and observations are recorded on the form. The sampling person relinquishes the samples by signing and dating the form, and the field sample control manager signs to accept the samples. The field sample control manager then transfers the information on the field sample tracking report form to a chain-of-custody form and enters the analytical methods requested.

1.3.3 Sample Containers and Preservation Techniques

The module and metal tag identification are to be placed back into the labeled vial which is then sealed. The samples are packed in a cooler containing ice at a temperature of 4°C and shipped to the laboratory.

1.3.4 Field Quality Control Sampling Procedures

There are no specific quality assurance activities which apply to the implementation of these procedures. However, the following general QA procedures apply:

- All data must be documented on field data sheets or within site logbooks.
- All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior and after sampling/operation and they must be documented.

1.3.5 Decontamination Procedures

All sampling equipment will be properly decontaminated as outlined in the SOP for Decontamination of Field Equipment.

SECTION 2
SURFACE-SOIL SAMPLING

2.1 PURPOSE

The purpose of this standard operating procedure (SOP) is to describe the considerations and procedures for collecting representative surface samples. Analysis of surface samples can determine whether concentrations of specific surface pollutants exceed established action levels, and if the concentrations of soil pollutants present a risk to public health, welfare, or the environment.

Materials exposed on the land surface, including soils, sediments, and wastes, are subject to disturbance by weather conditions, vehicle traffic, bioturbation, and other effects. Because volatile contaminants are unlikely to be present in surficial materials, it generally is not necessary to obtain undisturbed samples from the surface. An exception to is when surface samples are collected from beneath an impermeable surface, such as a road or building slab. Surface soils are typically very heterogeneous in compositions and texture, and chemical concentrations in surface soils may vary dramatically over short depth intervals. Often, the first few inches of soil contain gravel, vegetation, or debris. It is desirable to use a sampling method that reduces the impacts of these heterogeneities without biasing the results.

For surface-soil sampling, some judgment may be needed to identify the ground surface datum. The objective is to sample the soil matrix and avoid collecting rock and plant material to the extent possible. Vegetation will be moved aside, dense vegetative matting, detritus or roots will be removed, and gravel will be scraped away to expose the ground surface. Surface samples from beneath pavement or concrete slabs will be collected after first removing road base and gravel to expose the underlying soil. In some locations, such as in the basements of buildings, the ground surface will be below grade. In these cases, depth below grade will be measured and recorded.

2.2 TECHNIQUE - DESCRIPTION

Soil samples may be collected using a variety of methods and equipment. The methods and equipment used are dependent on the type of sample required (disturbed versus undisturbed) and the type of soil. Samples that do not need to be undisturbed may be easily sampled using a spade, trowel, or scoop. Collecting undisturbed samples may be performed using a hand-auger, a trier, or a split-spoon sampler.

2.3 PROCEDURES

2.3.1 Preparation

1. Determine the extent of the sampling effort, the sampling methods to be employed, and which equipment and supplies are required.

2. Obtain necessary sampling and air monitoring equipment.

3. Decontaminate or preclean equipment, and ensure that it is in working order.

4. Prepare schedules, and coordinate with staff, client, and regulatory agencies as appropriate.

5. Perform a general site survey prior to site entry in accordance with the site-specific health and safety plan.

6. Use stakes, buoys, or flagging to identify and mark all sampling locations. Consider specific site factors, including extent and nature of contaminant, when selecting sample location. If required, the proposed locations may be adjusted based on site access, property boundaries, and surface obstructions. All staked locations will be cleared for underground utilities by the property owner prior to soil sampling.

2.3.2 Interferences and Potential Problems

There are two primary interferences or potential problems associated with soil sampling. These are cross-contamination of samples and improper sample collection methods. Cross-contamination can be eliminated or minimized through the use of sampling equipment dedicated to each sample location. If this is not possible or practical, then decontamination of sampling equipment is necessary. Improper sample collection methods include using contaminated sampling equipment, disturbing of the matrix causing in compaction of the sample, or inadequate homogenizing of the samples where required, which results in variable, non-representative analytical results.

2.3.3 Sampling Considerations

This method can be used in most soil types. Surface soil samples may be collected with spades, shovels, or scoops. Surface material can be removed to the required depth with this equipment, then a stainless steel or plastic scoop can be used to collect the sample.

Accurate, representative samples can be collected with this procedure depending on the care and precision taken. A flat, pointed mason trowel can be used to cut a block of the desired soil when undisturbed profiles are required. A stainless steel scoop, lab spoon, or plastic spoon will suffice in most other cases. Avoid the use of devices plated with chrome or other materials. Plating is particularly common with garden implements such as potting trowels.

Follow these procedures to collect surface-soil samples.

1. Carefully remove the top layer of soil or debris to the desired sample depth with a pre-cleaned spade.

2. Using a pre-cleaned, stainless-steel scoop, plastic spoon, or trowel, remove and discard a thin layer of soil from the area which came in contact with the spade.

3. Place the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogeneous sample representative of the entire sampling interval. Then, place the sample into an appropriate, labeled container(s) and secure the cap(s) tightly.

2.3.4 Sample Containers and Preservation Techniques

In order to ensure proper sample preservation, samples should be refrigerated to 4°C or less and holding time should be kept to a minimum.

2.3.5 Field Quality Control Sampling Procedures

There are no specific quality-assurance activities which apply to the implementation of these procedures. However, the following general QA procedures apply:

- All data must be documented on field data sheets or within site logbooks.
- All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior and after sampling/operation and they must be documented.

2.3.6 Decontamination Procedures

All sample equipment that comes into contact with soil or water must be decontaminated prior to sampling. Decontamination procedures for sampling equipment are described in the Decontamination of Field Equipment SOP.

SECTION 3
HOLLOW STEM AUGER DRILLING AND BOREHOLE SAMPLING

3.1 PURPOSE

The purpose of this standard operating procedure (SOP) is to describe the considerations and procedures and to establish the guidelines for hollow-stem auger (HSA) drilling (soil borings, wells, or piezometers) and formation sampling activities in unconsolidated formations. Formation (sediment/soil) sample collection include disturbed (drill cuttings), intact (split-spoon), and undisturbed (continuous core). Borehole abandonment (closure) procedures will also be addressed in this SOP.

The objective of drilling is to collected accurate subsurface information including lithological and chemical data. If the borehole is to be prepared for potential completion as a well or piezometer, the lithologic data is the most important information that can be collected. The lithologic data characterizes subsurface conditions, describes hydrogeologic coefficients qualitatively and/or quantitatively, and identifies optimum locations for screen zones if wells are constructed.

Data can be obtained through the physical examination and testing of formation samples, as well as knowledge regarding ground water levels. Thus, drill fluid mix, fluid loss, rate of drilling, lengths of split-spoon and continuous core recovery, etc. must be monitored and recorded by the on-site hydrogeologist or geologist.

3.2 TECHNIQUE - DESCRIPTION

Subsurface sampling is an intrusive activity that requires underground utility clearance at all sites and Unexploded Ordnance (UXO) clearance at sites where UXO may be present prior to performing the sampling. UXO clearance is described in the unexploded ordinance (UXO) operations SOP, and utility clearance is described in the Line Locating SOP.

Drilling rigs will be used for obtaining soil samples from boreholes deeper than five feet. The drilling method will depend on the target depth and the hydrogeologic conditions in the subsurface.

Each drilling rig will be supervised by a geologist with a minimum of three years experience in environmental drilling and sampling. All drilling operations and well installations will be conducted under the supervision of a registered geologist.

The geologist will verify that the drilling technique is the one specified in the investigation work plan, and that the drilling equipment mobilized by the driller is in good condition and proper working order. The driller will not be permitted to use a drilling rig that appears to be substandard, in disrepair, etc. possibly incapable of accomplishing the goals of the drilling program.

The hollow stem auger (HSA) method is the most commonly used drilling method for unconsolidated formations. HSA augers consist of continuous flights welded to a large-diameter pipe with a cutter head mounted at the bottom. Drill rods can pass through the hollow center (hollow stems) of the auger. During drilling, a center plug and pilot bit is inserted into the bottom of the pipe to prevent soil from coming up inside the augers.

For sampling, the plug and pilot bit are pulled up through the augers and a sampling device is lowered through the auger in its place. The augers act as a temporary casing to prevent caving and sloughing of the borehole walls.

This drilling method is rapid and extremely effective in most cohesive sediments, but is somewhat less effective in loose sandy material. Maximum penetration depth depends on soil conditions, the diameter of the auger flight, and the power of the drill rig; depths up to 250 feet bgs have been achieved under compatible conditions. A major advantage of this technique is that no fluids are introduced into the formation under normal conditions. If the auger flights can be removed and the integrity of the borehole maintained, electrical and radiation (e.g., gamma, neutron, etc.) geophysical logs can be run in the open borehole. If the auger flights must remain in the borehole, only radiation geophysical logs can be run through the auger flights. Well casing, screen, and sampling devices can be lowered through the hollow stem after removal of the center plug and pilot bit at the bottom of the auger flights, and filter packing and sealing of a well can be accomplished through the hollow stem. Auger flight outside diameters (OD) can range from five inches to 12 inches. The diameter of a well that can be constructed inside the hollow stem is limited to a maximum of approximately four inches.

Advantages of using the hollow stem auger drilling method are the following:

1. Soil samples can be collected from different strata during drilling;

2. It has the least potential for cross-contamination between strata of the common drilling techniques;

3. A large-diameter borehole may be drilled in which multiple wells can be installed; and

4. Less well development is generally needed than in mud rotary because of the relatively large diameter borehole, the ability to emplace a large and effective filter pack, and because no drilling fluids are introduced into the borehole.

Disadvantages include:

1. Very slow progress or refusal in coarse materials such as cobbles and boulders;

2. Cannot drill hard rock formations and is generally not suited for wells deeper than 100 feet;

3. Not good in caving formations; and

4. Potential for disturbing large volume of subsurface materials around the borehole; therefore affecting local permeabilities and creating annular channels for contaminant movement between different strata.

3.3 PROCEDURES

3.3.1 Preparation

The planning, selection, and implementation of any drilling program should include the following steps.

1. Review existing data on site geology and hydrogeology including publications, air photos, water-quality data, and existing maps. These may be obtained from local, state, or federal agencies.

2. Visit the site to determine field geologic conditions and potential access problems for the drilling rig, to establish water supply, and to delineate drill equipment and materials storage area.

3. Prepare site safety and health plan.

4. Define project objectives, and select drilling and sampling methods.

5. Determine need for containing drill cuttings or fluids and their disposal.

6. Prepare work plan including all of the above.

7. Prepare and execute the drilling contract.

8. Implement drilling program.

9. Prepare the final report, including background data, project objective, field procedures, and boring logs.

3.3.2 Field Preparation

1. Prior to the mobilization of the drilling rig, thoroughly decontaminate the rig and all associated equipment to remove all oil, grease, mud, etc.

2. Before drilling each boring, steam-clean and rinse all the down hole drill equipment with potable water to minimize cross-contamination as described in the Decontamination of Field Equipment SOP. Special attention should be given to the thread section of the casings and drill rods. All drilling equipment should be steam-cleaned at completion of the project to ensure that no contamination is transported to or from the sampling site.

3.3.3 Drilling

1. Because drilling is an intrusive activity, a utility clearance must be completed prior to conducting any drilling to assure that no underground utilities may be encountered during drilling.

2. Document all drilling-related activities (e.g., starting, stopping, footage, problems, decontamination, etc.) on the daily log form and in the field notebook. Record dates and times of activities, and names of personnel providing oversight.

3. Monitor and record speed of rotation, rate of drilling, and length of drill rods or casing in the borehole.

4. Confirm that the drill rods and core barrel are straight, or discontinue drilling.

5. Pay particular attention to the advancement of the boring because differences in the rate of drilling may be indicative of differences in the subsurface geologic conditions (e.g., sand and gravel versus clay).

6. Maintain a continuous dialogue with the driller to track and keep informed of all drilling activities (e.g., the speed of the drill and drilling pressure, difficult and easy drilling conditions, etc.).

7. Collect formation samples as described below in Section 1.3.4. Sample containers must be labeled properly with project number and name, site location, boring number, date, sample interval, and samplers initials.

8. Record geologic information on the boring log form and in the field notebook.

9. Handle and ship sample containers carefully to avoid breakage and disturbance.

3.3.4 Downhole Sampling Methods

Subsurface soil samples will be obtained using a variety of techniques, depending on the target depth and type of subsurface materials encountered. The preferred downhole sampling method will be continuous coring. When it works well, it allows observation of stratigraphic relations with minimum down time. Five-foot intervals can be cored at one time versus only 18-inch to two-foot intervals using split-spoon sampling, the other sampling option. Continuous split spoon sampling may be used, however, if adequate recoveries cannot be obtained by coring. Adequate recovery for continuous core and split spoon sampling will be defined as at least 80 percent recovery.

Prior to sampling, all equipment that comes into contact with the soil or water will be fully decontaminated as described in the SOP for Decontamination of Field Equipment.

Continuous Core Sampling

1. For continuous core sampling where volatile analyses are required, the sampler will be fitted with ten 6-inch long stainless steel liners. At locations where volatile analysis are not required, no stainless steel liners are required to be inserted into the core barrel.

2. The core barrel is attached to the drilling rods and advanced with the augers. After the drill rods have been advanced five feet, the core barrel is retrieved and opened, and the liners are removed.

3. As the liners are separated, an photoionization detector (PID) or flame ionization detector (FID) probe will be inserted into the gap between two liners, and the liner exhibiting the highest reading will be selected for analysis. In general, the middle liner will be collected for laboratory analysis.

4. Half of the soil in the top liner will be placed into a resealable plastic bag and left in the sun for approximately fifteen minutes to allow VOCs to volatilize. The soil vapor in the plastic bag head space will then be tested with a PID or FID. Background VOCs in the plastic bag will be determined by testing the head space in an empty bag. Results of the organic vapor screening will be recorded on the boring logs.

5. Soils in the liners will be logged before they are sealed if VOCs are not contaminants of concern. If VOCs are an analyte, the sample liner will immediately be sealed, and soils from adjacent liners will be logged. Small portions of soil at the ends of the liners will be scraped off and classified. The area where the sampler is opened will be swept clear of soil between successive openings of the split spoon samplers.

6. The liners collected for laboratory analysis will be covered at both ends with Teflon sheets, capped, and sealed with cohesive tape. Adhesive tape will not be used.

7. Labels will be affixed to the liners bearing job designation, time, boring number, sample depth interval, sample number, sample date, and the initials of the sampling personnel.

8. The samples will be enclosed in a plastic bag and stored in a cooler maintained at 4°C prior to shipment.

Split-Spoon Sampling

Split-spoon sampling will be executed following American Society for Testing and Materials (ASTM) D1586-84 Standard Method for Penetration Test and Split-barrel Sampling of Soils. Relatively undisturbed samples from known depths can be obtained using this method.

1. The drilling rods holding the bottom plug in place are withdrawn from the borehole, the plug and pilot bit removed, and the split-spoon sampler attached and lowered into the hole. The 18-inch long split-spoon sampler will be fitted with three stainless steel liners.

2. The sampler will be driven 18 inches or to refusal with a 140-pound hammer dropping 30 inches repeatedly. The number of blows required to drive the sampler every six inches will be recorded. Refusal will be defined as requiring 50 blows with the hammer to advance the sampler six inches or less.

3. Once the sampler is retrieved, the split spoon can be opened and the sample liner removed.

4. From this point on all procedures are similar to those described in continuous core sampling (numbers 3 through 9).

3.3.5 Borehole Abandonment or Closure

1. To prevent contamination of clean soil or ground water by contaminated materials on the surface or penetrated by the boring, the borehole will be backfilled to the surface with a cement/bentonite grout. The grout will be tremmied into the hole through the augers.

2. Once the grout has set up, the surface of the borehole will be covered with material of the original ground surface. A temporary wooden survey stake will be used to mark the boring location, and the boring number marked on the stake for subsequent surveying of the borehole location.

3. For each abandoned borehole, the procedure will be documented on an appropriate field form or in the study notebook. Documentation may include borehole designation, location, depth of borehole, copy of the geologic log, date of grouting, water level prior to grouting, any other state or local well abandonment reporting requirements.

3.3.6 Field Quality Control Sampling Procedures

There are no specific quality assurance activities which apply to the implementation of these procedures. However, the following general QA procedures apply:

- All data must be documented on field data sheets or within site logbooks.
- All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior and after sampling/operation and they must be documented.

3.3.7 Field Quality Control Sampling Procedures

All sample equipment that comes into contact with soil and/or water must be decontaminated prior to sampling. Decontamination procedures for sampling equipment are described in the Decontamination of Field Equipment SOP.

SECTION 4
TEST PIT AND TRENCH EXCAVATION AND SAMPLING

4.1 PURPOSE

The purpose of this standard operating procedure (SOP) is to describe the considerations and procedures and to establish the guidelines for the excavation of test pits and trenches at former waste burial locations to identify the waste and observe spatial relationships. Sampling will be conducted during the excavation or after the excavation is complete, based on observation and at the discretion of the field geologist. These samples will be collected to meet several objectives, including identifying the nature of the chemical contaminants present, identifying the lateral and/or vertical boundaries of the affected soil volume, and estimating the range of contaminant concentrations present.

4.2 TECHNIQUE - DESCRIPTION

4.2.1 Test Pit and Trench Excavation Methods

These relatively large excavations are used to remove sections of soil, when detailed examination of soil characteristics (horizontal structure, color, etc.) are required.

Trenching across boundaries and through waste piles will be done using standard earthmoving equipment, such as a backhoe, excavator, or bulldozer. The type of equipment used will depend on the size and depth of the excavation. In most cases, the maximum depth will be limited by the reach of the excavator arm to about 15 feet. Past waste disposal pits are likely to have been limited to a similar depth also. For excavations deeper than five feet, side slope grades will be kept at 1:1, in accordance with USACE requirements for excavations (USACE 1992).

4.2.1 Sampling Methods

In no case will any sampling personnel enter excavations. Samples will be taken from freshly-excavated material brought up on the blade or bucket of the earthmoving equipment. Sampling of this material may be collected with spades, shovels, or scoops.

The field geologist will observe the soil as it is removed from the pit and to the extent possible will collect the samples from minimally-disturbed material. Accurate, representative samples can be collected with this procedure depending on the care and precision taken. A flat, pointed mason trowel can be used to cut a block of the desired soil when undisturbed profiles are required. Avoid the use of devices plated with chrome or other materials. Plating is particularly common with garden implements such as potting trowels.

4.3 PROCEDURES

4.3.1 Sampling Considerations

Test Pit and Trench Sampling

Follow these procedures for collecting soil samples from test pit or trench excavations.

1. Prior to excavating with a backhoe, sampling locations must be cleared for underground and overhead utilities.

2. Using the backhoe, dig a trench to approximately 1 foot below the cleared sampling location. Place removed or excavated soils on plastic sheets. Trenches greater than 5 feet deep must be sloped or protected by a shoring system, as required by OSHA regulations.

3. Use a shovel to remove a 1- to 2-inch layer of soil from the vertical face of the pit where sampling is to be done.

4. Take samples using a trowel, scoop, or coring devices at the desired intervals. Be sure to scrape the vertical face at the point of sampling to remove any soil that may have fallen from above, and to expose fresh soil for sampling. In many instances, samples can be collected directly from the backhoe bucket.

5. If the sample is to be analyzed for volatile organics, volatile organic analysis is to be performed, push a stainless steel liner directly into the soil in the excavation wall or in the backhoe bucket. Remove the liner and seal the ends tightly with teflon seals and plastic covers. Label the sample. If the sample will not be analyzed for VOCs, place the sample into a stainless steel, plastic, or other appropriate homogenization container, and mix thoroughly to obtain a homogeneous sample representative of the entire sampling interval. Then, place the sample into an appropriate, labeled container(s) and secure the cap(s) tightly; or, if composite samples are to be collected, place a sample from another sampling interval into the homogenization container and mix thoroughly. When compositing is complete, place the sample into the appropriate, labeled container(s) and secure the cap(s) tightly.

6. Abandon the pit or excavation according to applicable state regulations. Generally, shallow excavations can simply be backfilled with the removed soil material.

4.3.2 Test Pit and Trench Logs

The field geologist will prepare a geologic log of the sidewalls of the test pit or trench. The test pit and trench logs are annotated sketches, to scale, showing the dimensions of the pit; depths, thicknesses, disposition, and lithology of bedding; depths, and descriptions of wastes; locations of stained soil; presence of water; locations and values of field measurements; locations of samples; and other pertinent observations. The logs will include a plan view of the test pits and trenches and cross sections of the sidewalls, showing compass directions.

4.3.3 Backfilling

Unless specific site conditions require the immediate disposal of the excavated material, all excavated material will be backfilled into the excavation at the completion of sampling after the excavation has been lined with once a layer of 10-mil polyethylene. The liner will cover the bottom of the excavation and overlap the sides so the backfill is separated from in-situ material.

4.3.4 Sample Containers and Preservation Techniques

In order to ensure proper sample preservation, samples should be refrigerated to 4°C or less and holding time should be kept to a minimum.

4.3.5 Field Quality Control Sampling Procedures

There are no specific quality-assurance activities which apply to the implementation of these procedures. However, the following general QA procedures apply:

- All data must be documented on field data sheets or within site logbooks.
- All instrumentation must be operated in accordance with operating instructions as supplied by the manufacturer, unless otherwise specified in the work plan. Equipment checkout and calibration activities must occur prior and after sampling/operation and they must be documented.

4.3.6 Decontamination Procedures

All sample equipment that comes into contact with soil must be decontaminated prior to sampling. Decontamination procedures for soil sampling equipment are described in the Decontamination of Field Equipment SOP.

APPENDIX D

GEOPHYSICAL SURVEY RESULTS

APPENDIX E

SOIL BORING LOGS

APPENDIX F

SURVEYOR RESULTS

Siteid	PTID	Northing	Easting
FCDL#5	SG01	31850.27	6542.97
FCDL#5	SG02	31770.53	6562.85
FCDL#5	SG03	31690.05	6582.12
FCDL#5	SG04	31612.33	6600.21
FCDL#5	SG05	31535.21	6620.94
FCDL#5	SG06	31456.79	6638.06
FCDL#5	SG07	31884.61	6626.53
FCDL#5	SG08	31808.68	6636
FCDL#5	SG09	31726.33	6651.55
FCDL#5	SG10	31656.41	6664.96
FCDL#5	SG11	31578.45	6675.73
FCDL#5	SG12	31499.19	6690.45
FCDL#5	SG13	31419.68	6705.18
FCDL#5	SG14	31861.49	6710.28
FCDL#5	SG15	31793.66	6719.16
FCDL#5	SG16	31717.51	6733.67
FCDL#5	SG17	31637.67	6748.89
FCDL#5	SG18	31560.52	6762.94
FCDL#5	SG19	31483.35	6776.85
FCDL#5	SG20	31405.51	6793.52
FCDL#5	SG21	31324.51	6801.05
FCDL#5	SG22	31846.05	6792.79
FCDL#5	SG23	31779.52	6802.52
FCDL#5	SG24	31682.74	6818.33
FCDL#5	SG25	31610.66	6828.27
FCDL#5	SG26	31536.62	6840.46
FCDL#5	SG27	31462.24	6852.13
FCDL#5	SG28	31382.97	6865.28
FCDL#5	SG29	31303.87	6880.24
FCDL#5	SG30	31770.57	6899.99
FCDL#5	SG31	31664.33	6909.64
FCDL#5	SG32	31590.53	6921.65
FCDL#5	SG33	31512.23	6934.58
FCDL#5	SG34	31445.57	6943.02
FCDL#5	SG35	31359.26	6955.97
FCDL#5	SG36	31630.18	6992.04
FCDL#5	SG37	31563.25	7002.83
FCDL#5	SG38	31491.65	7013.82
FCDL#5	SG39	31421.44	7024.91
FCDL#5	SS01	31852.08	6600.58
FCDL#5	SS02	31771.53	6614.71
FCDL#5	SS03	31694.92	6627.53
FCDL#5	SS04	31624.96	6640.65
FCDL#5	SS05	31530.43	6655.94
FCDL#5	SS06	31455.54	6666.26
FCDL#5	SS07	31816.93	6663.31
FCDL#5	SS08	31731.8	6680.07
FCDL#5	SS09	31656.34	6695.82
FCDL#5	SS10	31584.27	6712.44
FCDL#5	SS11	31494.9	6730.74
FCDL#5	SS12	31424.9	6746.34
FCDL#5	SS13	31841.32	6730.1
FCDL#5	SS14	31768.97	6742.23
FCDL#5	SS15	31691.26	6755.17
FCDL#5	SS16	31616.74	6768.95
FCDL#5	SS17	31548.06	6778.65

Siteid	PTID	Northing	Easting
FCDL#5	SS18	31469.31	6793.29
FCDL#5	SS19	31400.69	6803.85
FCDL#5	SS20	31325.45	6817.61
FCDL#5	SS21	31725.93	6817.86
FCDL#5	SS22	31647.26	6831.51
FCDL#5	SS23	31576.22	6843.02
FCDL#5	SS24	31511.48	6851.72
FCDL#5	SS25	31436.79	6864.93
FCDL#5	SS26	31373.2	6876.1
FCDL#5	SS27	31599.93	6912.01
FCDL#5	SS28	31533.54	6920.59
FCDL#5	SS29	31469	6932.1
FCDL#5	SS30	31401.73	6942.35
FCDL#5	SB01	31354.51	6808.07
FCDL#5	SB02	31840.55	6563.52
FCDL#5	TP01	31683	6636.08
FCDL#5	TP02	31385.56	6782.54

APPENDIX G

SOIL GAS RESULTS

APPENDIX H

ANALYTICAL RESULTS TABLE

Description of Qualifiers

J Data are considered quantitatively estimated.

J+ Data are considered quantitatively estimated with a possible high bias.

J- Data are considered quantitatively estimated with a possible low bias.

N Data are considered quantitatively presumptive due to tentative analyte identification.

NJ Data are considered quantitatively presumptive due to tentative analyte identification; the associated value is considered quantitatively estimated.

R Data are rejected and considered unuseable for all purposes.

U Analyte is considered not present above the level of the associated value.

UJ Analyte is considered not present above the level of the associated value; the associated value is considered quantitatively estimated.

UJ- Analyte is considered not present above the level of the associated value; the associated value is considered quantitatively estimated with a possible low bias.

Former Construction Debris Landfill #5
Remediation Parameters

Sample ID	Sample Date	Depth	Percent Water	pH	Redox Potential	Total Organic Carbon
	CRQL		0	0	0	0.025
	Units		PERCENT	PH UNITS	mV	PERCENT
FCDL#5-SB01S-01	5/3/96	0.5	18	7.3	NA	NA
FCDL#5-SB01S-02	5/3/96	2.5	16	7.8	NA	NA
FCDL#5-SB02S-01	5/3/96	0.5	14	7.4	NA	NA
FCDL#5-SB02S-02	5/3/96	2.5	11	7.1	NA	NA
FCDL#5-SB02S-03	5/3/96	5	10	8.2	NA	NA
FCDL#5-SB03S-01	5/3/96	0.5	24	7.6	NA	NA
FCDL#5-SB03S-02	5/3/96	2.5	24	7.9	NA	NA
FCDL#5-SB03S-03	5/3/96	5	19	8.1	NA	NA
FCDL#5-SB03S-04	5/3/96	10	19	8	NA	NA
FCDL#5-SB04S-03	5/3/96	5.5	22	8	NA	NA
FCDL#5-SS01S-01	9/23/95	1	8.1	7.1	NA	NA
FCDL#5-SS02S-01	9/23/95	1	11	7	360	1.2
FCDL#5-SS03S-01	9/23/95	1	5.4	7.2	NA	NA
FCDL#5-SS04S-01	9/23/95	1	13	7.3	NA	NA
FCDL#5-SS05S-01	9/24/95	1	12	6.9	NA	NA
FCDL#5-SS06S-01	9/24/95	1	12	6.6	NA	NA
FCDL#5-SS07S-01	9/23/95	1	10	7	NA	NA
FCDL#5-SS08S-01	9/23/95	1	6.2	7.2	NA	NA
FCDL#5-SS09S-01	9/23/95	1	13	7.6	NA	NA
FCDL#5-SS10S-01	9/24/95	1	13	7.2	NA	NA
FCDL#5-SS11S-01	9/24/95	1	8.9	6.1	NA	NA
FCDL#5-SS12S-01	9/24/95	1	11	6.7	NA	NA
FCDL#5-SS13S-01	9/23/95	1	9.1	7.1	NA	NA
FCDL#5-SS14S-01	9/23/95	1	7.7	7.2	NA	NA
FCDL#5-SS15S-01	9/23/95	1	6	7	NA	NA
FCDL#5-SS16S-01	9/23/95	1	11	7.7	350	1.7
FCDL#5-SS17S-01	9/24/95	1	18	7.4	NA	NA
FCDL#5-SS18S-01	9/24/95	1	14	6.8	NA	NA
FCDL#5-SS19S-01	9/24/95	1	12	7	NA	NA
FCDL#5-SS20S-01	9/24/95	1	8.1	6.4	NA	NA
FCDL#5-SS21S-01	9/24/95	1	7.1	7.1	NA	NA
FCDL#5-SS22S-01	9/24/95	1	8.9	6.9	NA	NA
FCDL#5-SS23S-01	9/24/95	1	8	6.8	NA	NA
FCDL#5-SS24S-01	9/24/95	1	6.9	7.1	NA	NA
FCDL#5-SS25S-01	9/24/95	1	10	6.7	NA	NA
FCDL#5-SS26S-01	9/24/95	1	8.8	6.9	NA	NA
FCDL#5-SS27S-01	9/24/95	1	9.2	7	NA	NA
FCDL#5-SS28S-01	9/24/95	1	7.1	6.8	NA	NA
FCDL#5-SS29S-01	9/24/95	1	9.5	6.7	380	1.6
FCDL#5-SS30S-01	9/24/95	1	7.9	6.8	NA	NA

Former Construction Debris Landfill #5
Remediation Parameters

Sample ID	Sample Date	Depth	Percent Water	pH	Redox Potential	Total Organic Carbon
	CRQL		0	0	0	0.025
	Units		PERCENT	PH UNITS	mV	PERCENT
FCDL#5-SS31S-01	9/23/95	1	6.5	7	NA	NA
FCDL#5-SS32S-01	9/23/95	1	7.8	7.3	NA	NA
FCDL#5-SS33S-01	9/24/95	1	6.2	6.7	NA	NA
FCDL#5-TP01S-01	4/23/96	3	22	7.6	317	2.5
FCDL#5-TP01S-02	4/23/96	3.5	11	7.2	318	1.9
FCDL#5-TP02S-01	4/23/96	1.5	22	7.3	NA	NA
FCDL#5-TP02S-02	4/23/96	2.5	22	7.9	NA	NA
FCDL#5-TP03S-01	4/23/96	3.5	12	7.1	335	3.2

Former Construction Debris Landfill #5
Metals

Sample ID	Sample Date	Depth	Arsenic	Barium	Beryllium	Cadmium	Chromium	Lead	Mercury	Potassium	Selenium	Silver
		CRQL	0.5	2	0.2	0.2	0.5	0.5	0.2	500	0.5	0.5
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	9.2	189	1.1	0.42	34.9	20.5	<0.033	1390	0.82	<0.1
FCDL#5-SS02S-01	9/23/95	1	5.8	341	1.4	0.93	37.5	17.1	<0.033	1430	1	<0.1
FCDL#5-SS03S-01	9/23/95	1	4.8	253	1.2	0.88	31.6	18.4	<0.033	1510	0.78	<0.1
FCDL#5-SS04S-01	9/23/95	1	5.9	356	1.5	1.2	43.7	15.9	<0.033	1330	1.2	<0.1
FCDL#5-SS05S-01	9/24/95	1	5	268	1.2	0.77	31.8	17.5	<0.033	1490	0.92	<0.1
FCDL#5-SS06S-01	9/24/95	1	5.2	297	1.3	0.71	33	14.8	<0.033	1820	0.75	<0.1
FCDL#5-SS07S-01	9/23/95	1	5.6	233	1.4	0.69	36.1	14.9	<0.033	1570	1	<0.1
FCDL#5-SS08S-01	9/23/95	1	6.2	322	0.74	1.4	23.8	140	0.038 J	1390	0.75	0.11 J
FCDL#5-SS09S-01	9/23/95	1	5.3	279	1.2	0.77	33.7	18.2	<0.033	1290	0.86	<0.1
FCDL#5-SS10S-01	9/24/95	1	6.1	387	1.6	0.96	39	26	<0.033	1450	0.85	<0.1
FCDL#5-SS11S-01	9/24/95	1	4.4	216	0.78	0.66	21.6	24.3	<0.033	1360	0.87	<0.1
FCDL#5-SS12S-01	9/24/95	1	5.5	203	1.2	0.62	30.5	21.5	<0.033	1300	0.7	<0.1
FCDL#5-SS13S-01	9/23/95	1	4.9	201	1.3	0.63	37.4	14.3	<0.033	1710	1	<0.1
FCDL#5-SS14S-01	9/23/95	1	5.3	363	1.3	0.99	34.8	27.1	<0.033	2110	0.94	<0.1
FCDL#5-SS15S-01	9/23/95	1	4.7	231	1.1	0.74	28.2	69	<0.033	2350	0.91	<0.1
FCDL#5-SS16S-01	9/23/95	1	6.5	435 J-	1.3	1.2 J	39 J	134 J-	<0.033	1830	0.85	<0.1
FCDL#5-SS17S-01	9/24/95	1	10.7	550 J-	1.1	1.1 J	50.5 J	2990 J-	<0.033	2410	1.3 J	<0.3
FCDL#5-SS18S-01	9/24/95	1	7.2	394 J-	1	1.6 J	26.4 J	139 J-	<0.033	1770	0.72	<0.1
FCDL#5-SS19S-01	9/24/95	1	5.4	310 J-	1.2	0.81 J	29.4 J	23.4 J-	<0.033	1560	0.64	<0.1
FCDL#5-SS20S-01	9/24/95	1	6	360 J-	1.4	0.95 J	39.3 J	20.9 J-	<0.033	1770	0.67	<0.1
FCDL#5-SS21S-01	9/24/95	1	5.2	460 J-	1.5	1.2 J	33.4 J	14.5 J-	<0.033	1620	0.45 J	<0.1
FCDL#5-SS22S-01	9/24/95	1	4.4	201 J-	1.2	0.48 J	31.3 J	16.9 J-	<0.033	1460	0.44 J	<0.1
FCDL#5-SS23S-01	9/24/95	1	4.9	224 J-	1.1	0.57 J	30.5 J	31.9 J-	<0.033	1580	0.87	<0.1
FCDL#5-SS24S-01	9/24/95	1	5.8	318 J-	1.3	0.92 J	37 J	49.5 J-	<0.033	1870	0.82	<0.1
FCDL#5-SS25S-01	9/24/95	1	4.6	242 J-	1.2	0.56 J	32.3 J	16.1 J-	<0.033	1830	0.35 J	<0.1
FCDL#5-SS26S-01	9/24/95	1	6.1	206 J-	0.73	0.95 J	25.4 J	316 J-	<0.033	1140	0.69	<0.1
FCDL#5-SS27S-01	9/24/95	1	4.4	229 J-	1.2	0.69 J	29.1 J	11.4 J-	<0.033	1670	0.42 J	<0.1
FCDL#5-SS28S-01	9/24/95	1	5	220 J-	1.1	0.71 J	28.9 J	17.9 J-	<0.033	2100	0.73	<0.1
FCDL#5-SS29S-01	9/24/95	1	5	267 J-	1.3	0.66 J	33.9 J	15.9 J-	<0.033	1590	0.6	<0.1
FCDL#5-SS30S-01	9/24/95	1	6	272 J-	1.1	1 J	33.3 J	183 J-	<0.033	1540	0.43 J	<0.1
FCDL#5-SS31S-01	9/23/95	1	6	312 J-	1.3	0.79 J	33.6 J	16 J-	<0.033	1530	0.46 J	<0.1

Former Construction Debris Landfill #5
Metals

Sample ID	Sample Date	Depth	Arsenic	Barium	Beryllium	Cadmium	Chromium	Lead	Mercury	Potassium	Selenium	Silver
		CRQL	0.5	2	0.2	0.2	0.5	0.5	0.2	500	0.5	0.5
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS32S-01	9/23/95	1	5.2	341 J-	1.2	0.97 J	33.3 J	62.9 J-	<0.033	1800	0.39 J	<0.1
FCDL#5-SS33S-01	9/24/95	1	5.1	242 J-	1.2	0.74 J	31.6 J	17.1 J-	<0.033	1880	<0.3	<0.1
FCDL#5-TP01S-01	4/23/96	3	8.9	326	1.5	<0.1	49.9	63.1	<0.02	1930	<0.6	<0.2
FCDL#5-TP01S-02	4/23/96	3.5	8.7	266	1.2	0.22 J	45.6	94.7	0.038 J	2160	<0.6	<0.2
FCDL#5-TP02S-01	4/23/96	1.5	7.1	432	0.89	1	29	289	<0.02	1230 J	1 J	<0.2
FCDL#5-TP02S-02	4/23/96	2.5	6	302	1.4	<0.1	47.7	27.3	<0.02	1740	<0.6	<0.2
FCDL#5-TP03S-01	4/23/96	3.5	6.5	266	0.88	0.25 J	33.9	97.1	0.028 J	1620	0.78 J	<0.2
FCDL#5-SB01S-01	5/3/96	0.5	6.2	438	1.6	<0.1	57.2	16.7	<0.02	1600	<0.6	0.71 J
FCDL#5-SB01S-02	5/3/96	2.5	6.6	1160	1.2	<0.15	61.7	7.4	<0.02	796	<0.9	<0.3
FCDL#5-SB02S-01	5/3/96	0.5	9.4	429	2	<0.15	56.3	23.7	<0.02	1400	<0.9	<0.3
FCDL#5-SB02S-02	5/3/96	2.5	8.9	405	1.7	<0.1	48.9	20.6	<0.02	1760	<0.6	<0.2
FCDL#5-SB02S-03	5/3/96	5	4	434	0.92	<0.1	26.8	5.3	<0.02	806	<0.6	<0.2
FCDL#5-SB03S-01	5/3/96	0.5	4.9	414	1.6	<0.1	50.5	16	<0.02	1670	<0.6	<0.2
FCDL#5-SB03S-02	5/3/96	2.5	5.2	291	1.4	<0.1	49.6	14.8	<0.02	2670	<0.6	<0.2
FCDL#5-SB03S-03	5/3/96	5	5.2	1180 J	1.5	<0.1	56	14.3	<0.02	2600	<0.6	<0.2
FCDL#5-SB03S-04	5/3/96	10	7.5	257	1.3	<0.1	39.3	16.6	<0.02	2180	<0.6	<0.2
FCDL#5-SB04S-03	5/3/96	5.5	5.5	238 UJ	1.4	<0.1	51.8	13.7	<0.02	2580	<0.6	<0.2

Analyses	48	48	48	48	48	48	48	48	48	48	48
Detections	48	48	48	36	48	48	3	48	34	2	
Maximum Concentration	10.7	1180	2	1.6	61.7	2990	0.038	2670	1.3	0.71	
Arizona HBGL - Nonresidential	3.82	28700	1.34	244	5950	1400	123		2030	2030	
Arizona HBGL - Nonresidential Hits	48	0	15	0	0	1	0		0	0	
Maximum Background Concentration	44	1610	5	1.5	90	30	0.3	0	0.8	2.6	
Background Hits	0	0	0	1	0	14	0	0	16	0	

Former Construction Debris Landfill #5
Petroleum Hydrocarbons

Sample ID	Sample Date	Depth	TPH, Recoverable	Diesel Fuel 2
		CRQL	10	10
		Units	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<2	<0
FCDL#5-SS02S-01	9/23/95	1	<2	<0
FCDL#5-SS03S-01	9/23/95	1	3.4 J	18 J
FCDL#5-SS04S-01	9/23/95	1	3.1 J	<0
FCDL#5-SS05S-01	9/24/95	1	5.9 J	<0
FCDL#5-SS06S-01	9/24/95	1	3.9 J	<0
FCDL#5-SS07S-01	9/23/95	1	<2	<0
FCDL#5-SS08S-01	9/23/95	1	26	7100 J
FCDL#5-SS09S-01	9/23/95	1	6 J	<0
FCDL#5-SS10S-01	9/24/95	1	41	57 J
FCDL#5-SS11S-01	9/24/95	1	710	450 J+
FCDL#5-SS12S-01	9/24/95	1	4.9 J	<0
FCDL#5-SS13S-01	9/23/95	1	2.3 J	<0
FCDL#5-SS14S-01	9/23/95	1	14	11 J
FCDL#5-SS15S-01	9/23/95	1	8.5 J	12 J
FCDL#5-SS16S-01	9/23/95	1	130 J-	300 J+
FCDL#5-SS17S-01	9/24/95	1	450 J-	400 J
FCDL#5-SS18S-01	9/24/95	1	7100 J-	1900 J
FCDL#5-SS19S-01	9/24/95	1	8.1 J-	39 J
FCDL#5-SS20S-01	9/24/95	1	5.2 J-	<0
FCDL#5-SS21S-01	9/24/95	1	3.2 J-	<0
FCDL#5-SS22S-01	9/24/95	1	<2 R	<0
FCDL#5-SS23S-01	9/24/95	1	130 J-	540 J
FCDL#5-SS24S-01	9/24/95	1	1600 J-	770 J
FCDL#5-SS25S-01	9/24/95	1	21 J-	42 J
FCDL#5-SS26S-01	9/24/95	1	3100 J-	5000 J
FCDL#5-SS27S-01	9/24/95	1	5.3 J-	<0
FCDL#5-SS28S-01	9/24/95	1	4.1 J-	<0
FCDL#5-SS29S-01	9/24/95	1	5.7 J-	<0
FCDL#5-SS30S-01	9/24/95	1	4300 J-	7100 J
FCDL#5-SS31S-01	9/23/95	1	3.3 J-	<0
FCDL#5-SS32S-01	9/23/95	1	42 J-	460 J+
FCDL#5-SS33S-01	9/24/95	1	8.2 J-	<0
FCDL#5-TP01S-01	4/23/96	3	100	2000 J
FCDL#5-TP01S-02	4/23/96	3.5	360 J	4500 J
FCDL#5-TP02S-01	4/23/96	1.5	780	2800 J
FCDL#5-TP02S-02	4/23/96	2.5	59	170 J+
FCDL#5-TP03S-01	4/23/96	3.5	660 J	3600 J
FCDL#5-SB01S-01	5/3/96	0.5	<2	<0
FCDL#5-SB01S-02	5/3/96	2.5	<2	<0
FCDL#5-SB02S-01	5/3/96	0.5	<2	<0
FCDL#5-SB02S-02	5/3/96	2.5	5 J	<0
FCDL#5-SB02S-03	5/3/96	5	<2	<0
FCDL#5-SB03S-01	5/3/96	0.5	42	<0

Former Construction Debris Landfill #5
Petroleum Hydrocarbons

Sample ID	Sample Date	Depth	TPH, Recoverable	Diesel Fuel 2
		CRQL	10	10
		Units	mg/kg	mg/kg
FCDL#5-SB03S-02	5/3/96	2.5	7.6 J	<0
FCDL#5-SB03S-03	5/3/96	5	3.5 J	5400 J
FCDL#5-SB03S-04	5/3/96	10	<2	3400 J
FCDL#5-SB04S-03	5/3/96	5.5	3.6 J	<0 UJ

Analyses	48	48
Detections	39	23
Maximum Concentration	7100	7100
Arizona HBGL - Nonresidential		
Arizona HBGL - Nonresidential Hits		
Arizona HBGL - Residential	7000	
Arizona HBGL - Residential Hits	1	

Former Construction Debris Landfill #5
Volatile Organic Compounds

Sample ID	Sample Date	Depth	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene
		CRQL	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SB02S-03	5/3/96	5	<0.00016	<0.00022	<0.00016	<0.0003	<0.000088	<0.00065	<0.00028	<0.00048
FCDL#5-SB03S-03	5/3/96	5	<0.00016	<0.00022	<0.00016	<0.0003	<0.000088	<0.00065	<0.00028	<0.00048
FCDL#5-SB03S-04	5/3/96	10	<0.00016	<0.00022	<0.00016	<0.0003	<0.000088	<0.00065	<0.00028	<0.00048
FCDL#5-SB04S-03	5/3/96	5.5	<0.00016	<0.00022	<0.00016	<0.0003	<0.000088	<0.00065	<0.00028	<0.00048

Analyses	4	4	4	4	4	4	4	4
Detections	0	0	0	0	0	0	0	0
Maximum Concentration	0	0	0	0	0	0	0	0
Arizona HBGL - Nonresidential	182	38500	28.6	84	4200	8		
Arizona HBGL - Nonresidential Hits	0	0	0	0	0	0		

Former Construction Debris Landfill #5
Volatile Organic Compounds

Sample ID	Sample Date	Depth	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloro-propane (DBCP)	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane
		CRQL	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SB02S-03	5/3/96	5	<0.00061	<0.0005	<0.00023	<0.00064	<0.00031	<0.00025	<0.00019	<0.0004
FCDL#5-SB03S-03	5/3/96	5	<0.00061	<0.0005	<0.00023	<0.00064	<0.00031	<0.00025	<0.00019	<0.0004
FCDL#5-SB03S-04	5/3/96	10	<0.00061	<0.0005	<0.00023	<0.00064	<0.00031	<0.00025	<0.00019	<0.0004
FCDL#5-SB04S-03	5/3/96	5.5	<0.00061	<0.0005	<0.00023	<0.00064	<0.00031	<0.00025	<0.00019	<0.0004

Analyses	4	4	4	4	4	4	4	4
Detections	0	0	0	0	0	0	0	0
Maximum Concentration	0	0	0	0	0	0	0	0
Arizona HBGL - Nonresidential	0.67	4200		4.07	0.08	38500	63	84
Arizona HBGL - Nonresidential Hits	0	0		0	0	0	0	0

Former Construction Debris Landfill #5
Volatile Organic Compounds

Sample ID	Sample Date	Depth	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Chlorotoluene	4-Chlorotoluene	Benzene
		CRQL	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SB02S-03	5/3/96	5	<0.00018	<0.00034	<0.00022	<0.00021	<0.00092	<0.0006	<0.00034	<0.00032
FCDL#5-SB03S-03	5/3/96	5	<0.00018	<0.00034	<0.00022	<0.00021	<0.00092	<0.0006	<0.00034	<0.00032
FCDL#5-SB03S-04	5/3/96	10	<0.00018	<0.00034	<0.00022	<0.00021	<0.00092	<0.0006	<0.00034	<0.00032
FCDL#5-SB04S-03	5/3/96	5.5	<0.00018	<0.00034	<0.00022	<0.00021	<0.00092	<0.0006	<0.00034	<0.00032

Analyses	4	4	4	4	4	4	4	4
Detections	0	0	0	0	0	0	0	0
Maximum Concentration	0	0	0	0	0	0	0	0
Arizona HBGL - Nonresidential		35000		200		8050		197
Arizona HBGL - Nonresidential Hits		0		0		0		0

Former Construction Debris Landfill #5
Volatile Organic Compounds

Sample ID	Sample Date	Depth	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chloroethane
		CRQL	0.005	0.005	0.005	0.01	0.005	0.005	0.005	0.01
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SB02S-03	5/3/96	5	<0.0003	<0.00051	<0.00026	<0.000099	<0.00063	<0.00036	<0.00023	<0.00077
FCDL#5-SB03S-03	5/3/96	5	<0.0003	<0.00051	<0.00026	<0.000099	<0.00063	<0.00036	<0.00023	<0.00077
FCDL#5-SB03S-04	5/3/96	10	<0.0003	<0.00051	<0.00026	<0.000099	<0.00063	<0.00036	<0.00023	<0.00077
FCDL#5-SB04S-03	5/3/96	5.5	<0.0003	<0.00051	<0.00026	<0.000099	<0.00063	<0.00036	<0.00023	<0.00077

Analyses	4	4	4	4	4	4	4	4	
Detections	0	0	0	0	0	0	0	0	
Maximum Concentration	0	0	0	0	0	0	0	0	
Arizona HBGL - Nonresidential			92	714	560	42	8050		
Arizona HBGL - Nonresidential Hits			0	0	0	0	0		

Former Construction Debris Landfill #5
Volatile Organic Compounds

Sample ID	Sample Date	Depth	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Methylene Chloride	Ethylbenzene
		CRQL	0.005	0.01	0.005	0.005	0.005	0.01	0.005	0.005
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SB02S-03	5/3/96	5	<0.00024	<0.003	<0.00054	<0.00028	<0.00033	<0.00055	<0.00039	<0.00024
FCDL#5-SB03S-03	5/3/96	5	<0.00024	<0.003	<0.00054	<0.00028	<0.00033	<0.00055	<0.00039	<0.00024
FCDL#5-SB03S-04	5/3/96	10	<0.00024	<0.003	<0.00054	<0.00028	<0.00033	<0.00055	<0.00039	<0.00024
FCDL#5-SB04S-03	5/3/96	5.5	<0.00024	<0.003	<0.00054	<0.00028	<0.00033	<0.00055	<0.00039	<0.00024

Analyses	4	4	4	4	4	4	4	4
Detections	0	0	0	0	0	0	0	0
Maximum Concentration	0	0	0	0	0	0	0	0
Arizona HBGL - Nonresidential	924	350	4200	56		80500	756	42000
Arizona HBGL - Nonresidential Hits	0	0	0	0		0	0	0

Former Construction Debris Landfill #5
Volatile Organic Compounds

Sample ID	Sample Date	Depth	Hexachlorobutadiene	1-Methylethylbenzene	Isopropyltoluene	m- & p-Xylene(s)	MTBE	n-Butylbenzene	n-Propyl benzene	Naphthalene	o-Xylene
		CRQL	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SB02S-03	5/3/96	5	<0.00047 UJ	<0.00028	<0.00037	<0.00054	<0.01	<0.00035	<0.00023	<0.00024	<0.00023
FCDL#5-SB03S-03	5/3/96	5	<0.00047 UJ	<0.00028	<0.00037	<0.00054	<0.01	<0.00035	<0.00023	0.042	<0.00023
FCDL#5-SB03S-04	5/3/96	10	<0.00047 UJ	<0.00028	<0.00037	<0.00054	<0.01	<0.00035	<0.00023	0.047	<0.00023
FCDL#5-SB04S-03	5/3/96	5.5	<0.00047 UJ	<0.00028	<0.00037	<0.00054	<0.01	<0.00035	<0.00023	0.044	<0.00023

Analyses	4	4	4	4	4	4	4	4	4	4
Detections	0	0	0	0	0	0	0	3	0	
Maximum Concentration	0	0	0	0	0	0	0	0.047	0	
Arizona HBGL - Nonresidential	60	16450		805000	2030			16450	805000	
Arizona HBGL - Nonresidential Hits	0	0		0	0			0	0	

Former Construction Debris Landfill #5
Volatile Organic Compounds

Sample ID	Sample Date	Depth	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane
		CRQL	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SB02S-03	5/3/96	5	<0.00027	<0.00013	<0.00028	<0.00028	<0.00025	<0.00041	<0.00027	<0.00042
FCDL#5-SB03S-03	5/3/96	5	<0.00027	<0.00013	<0.00028	<0.00028	<0.00025	<0.00041	<0.00027	<0.00042
FCDL#5-SB03S-04	5/3/96	10	<0.00027	<0.00013	<0.00028	<0.00028	<0.00025	<0.00041	<0.00027	<0.00042
FCDL#5-SB04S-03	5/3/96	5.5	<0.00027	<0.00013	<0.00028	<0.00028	<0.00025	<0.00041	<0.00027	<0.00042

Analyses	4	4	4	4	4	4	4	4
Detections	0	0	0	0	0	0	0	0
Maximum Concentration	0	0	0	0	0	0	0	0
Arizona HBGL - Nonresidential		8050		113	80500	8050	504	122500
Arizona HBGL - Nonresidential Hits		0		0	0	0	0	0

Former Construction Debris Landfill #5
Volatile Organic Compounds

Sample ID	Sample Date	Depth	Vinyl chloride
		CRQL	0.01
		Units	mg/kg
FCDL#5-SB02S-03	5/3/96	5	<0.0015
FCDL#5-SB03S-03	5/3/96	5	<0.0015
FCDL#5-SB03S-04	5/3/96	10	<0.0015
FCDL#5-SB04S-03	5/3/96	5.5	<0.0015

Analyses	4
Detections	0
Maximum Concentration	0
Arizona HBGL - Nonresidential	3.02
Arizona HBGL - Nonresidential Hits	0

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Hexachlorobutadiene	Naphthalene	1,2,4,5-Tetrachloro-benzene	1,2-Diphenylhydrazine	1-Chloronaphthalene	1-Naphthylamine
		CRQL	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	1.7	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS02S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS03S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	0.06 J	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS04S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025 UJ
FCDL#5-SS05S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025 UJ
FCDL#5-SS06S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025 UJ
FCDL#5-SS07S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025 UJ
FCDL#5-SS08S-01	9/23/95	1	<1.7	<1.9	<1.2	<2.5	<1.1	27 J	<1.3	<1.8	<3.2	<2.5
FCDL#5-SS09S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	0.059 J	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS10S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	1.3	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS11S-01	9/24/95	1	<0.085	<0.095	<0.06	<0.125	<0.055	8.9	<0.065	<0.09	<0.16	<0.125
FCDL#5-SS12S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	0.3 J	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS13S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025 UJ
FCDL#5-SS14S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025 UJ
FCDL#5-SS15S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS16S-01	9/23/95	1	<0.17	<0.19	<0.12	<0.25	<0.11	6.9	<0.13	<0.18	<0.32	<0.25
FCDL#5-SS17S-01	9/24/95	1	<0.17	<0.19	<0.12	<0.25	<0.11	1.8 J	<0.13	<0.18	<0.32	<0.25
FCDL#5-SS18S-01	9/24/95	1	<0.85	<0.95	<0.6	<1.25	<0.55	45	<0.65	<0.9	<1.6	<1.25
FCDL#5-SS19S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	0.016 J	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS20S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS21S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS22S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS23S-01	9/24/95	1	<0.17	<0.19	<0.12	<0.25	<0.11 UJ	3.7	<0.13	<0.18	<0.32	<0.25
FCDL#5-SS24S-01	9/24/95	1	<0.17	<0.19	<0.12	<0.25	<0.11	2.4 J	<0.13	<0.18	<0.32	<0.25
FCDL#5-SS25S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	0.02 J	<0.013	<0.018	<0.032	<0.025

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Hexachlorobutadiene	Naphthalene	1,2,4,5-Tetrachloro-benzene	1,2-Diphenylhydrazine	1-Chloronaphthalene	1-Naphthylamine
		CRQL	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	1.7	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS26S-01	9/24/95	1	<0.85	<0.95	<0.6	<1.25	<0.55	42	<0.65	<0.9	<1.6	<1.25
FCDL#5-SS27S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS28S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS29S-01	9/24/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS30S-01	9/24/95	1	<0.85	<0.95	<0.6	<1.25	<0.55	120	<0.65	<0.9	<1.6	<1.25
FCDL#5-SS31S-01	9/23/95	1	<0.017	<0.019	<0.012	<0.025	<0.011	<0.014	<0.013	<0.018	<0.032	<0.025
FCDL#5-SS32S-01	9/23/95	1	<0.17	<0.19	<0.12	<0.25	<0.11	0.91 J	<0.13	<0.18	<0.32	<0.25
FCDL#5-SS33S-01	9/24/95	1	<0.034	<0.038	<0.024	<0.05	<0.022	0.17 J	<0.026	<0.036	<0.064	<0.05
FCDL#5-TP01S-01	4/23/96	3	<0.92	<0.88	<0.68	<0.84	<0.68	14 J	<0.52	<0.96	<1.28	<1
FCDL#5-TP01S-02	4/23/96	3.5	<4.6	<4.4	<3.4	<4.2	<3.4	38 J	<2.6	<4.8	<6.4	<5
FCDL#5-TP02S-01	4/23/96	1.5	<2.3	<2.2	<1.7	<2.1	<1.7	32 J	<1.3	<2.4	<3.2	<2.5
FCDL#5-TP02S-02	4/23/96	2.5	<0.92	<0.88	<0.68	<0.84	<0.68	13 J	<0.52	<0.96	<1.28	<1
FCDL#5-TP03S-01	4/23/96	3.5	<1.15	<1.1	<0.85	<1.05	<0.85	34	<0.65	<1.2	<1.6	<1.25
FCDL#5-SB01S-01	5/3/96	0.5	<0.023	<0.022	<0.017	<0.021	<0.017	<0.019	<0.013	<0.024	<0.032	<0.025
FCDL#5-SB01S-02	5/3/96	2.5	<0.023	<0.022	<0.017	<0.021	<0.017	<0.019	<0.013	<0.024	<0.032	<0.025
FCDL#5-SB02S-01	5/3/96	0.5	<0.023	<0.022	<0.017	<0.021	<0.017	<0.019	<0.013	<0.024	<0.032	<0.025
FCDL#5-SB02S-02	5/3/96	2.5	<0.023	<0.022	<0.017	<0.021	<0.017	<0.019	<0.013	<0.024	<0.032	<0.025
FCDL#5-SB02S-03	5/3/96	5	<0.023	<0.022	<0.017	<0.021	<0.017	<0.019	<0.013	<0.024	<0.032	<0.025
FCDL#5-SB03S-01	5/3/96	0.5	<0.115	<0.11	<0.085	<0.105	<0.085	1.4 J	<0.065	<0.12	<0.16	<0.125
FCDL#5-SB03S-02	5/3/96	2.5	<0.046	<0.044	<0.034	<0.042	<0.034	0.26 J	<0.026	<0.048	<0.064	<0.05
FCDL#5-SB03S-03	5/3/96	5	<2.3	<2.2	<1.7	<2.1	<1.7	75 J	<1.3	<2.4	<3.2	<2.5
FCDL#5-SB03S-04	5/3/96	10	<2.3	<2.2	<1.7	<2.1	<1.7	42	<1.3	<2.4	<3.2	<2.5
FCDL#5-SB04S-03	5/3/96	5.5	<0.023	<0.022	<0.017	<0.021	<0.017	0.17 J	<0.013	<0.024	<0.032	<0.025

Analyses	48	48	48	48	48	48	48	48	48	48
Detections	0	0	0	0	0	27	0	0	0	0
Maximum Concentration	0	0	0	0	0	120	0	0	0	0
Arizona HBGL - Nonresidential	4200	38500	35000	200	60	16450	123	7.1		
Arizona HBGL - Nonresidential Hits	0	0	0	0	0	0	0	0		

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol
		CRQL	1.7	1.7	0.33	0.33	0.33	1.7	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS02S-01	9/23/95	1	<0.07 UJ	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS03S-01	9/23/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS04S-01	9/23/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS05S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS06S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS07S-01	9/23/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS08S-01	9/23/95	1	<7	<4	<4	<2.2	<5.7	<6.7	<3.7	<2.1	<1.6	<1.6
FCDL#5-SS09S-01	9/23/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS10S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS11S-01	9/24/95	1	<0.35	<0.2	<0.2	<0.11	<0.285	<0.335	<0.185	<0.105	<0.08	<0.08
FCDL#5-SS12S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS13S-01	9/23/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS14S-01	9/23/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS15S-01	9/23/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS16S-01	9/23/95	1	<0.7	<0.4	<0.4	<0.22	<0.57	<0.67 UJ	<0.37	<0.21	<0.16	<0.16
FCDL#5-SS17S-01	9/24/95	1	<0.7	<0.4	<0.4	<0.22	<0.57	<0.67 UJ	<0.37	<0.21	<0.16	<0.16
FCDL#5-SS18S-01	9/24/95	1	<3.5	<2	<2	<1.1	<2.85	<3.35 UJ	<1.85	<1.05	<0.8	<0.8
FCDL#5-SS19S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067 UJ	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS20S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067 UJ	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS21S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067 UJ	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS22S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067 UJ	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS23S-01	9/24/95	1	<0.7	<0.4	<0.4	<0.22	<0.57	<0.67 UJ	<0.37	<0.21	<0.16	<0.16
FCDL#5-SS24S-01	9/24/95	1	<0.7	<0.4	<0.4	<0.22	<0.57	<0.67 UJ	<0.37	<0.21	<0.16	<0.16
FCDL#5-SS25S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067 UJ	<0.037	<0.021	<0.016	<0.016

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol
		CRQL	1.7	1.7	0.33	0.33	0.33	1.7	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS26S-01	9/24/95	1	<3.5	<2	<2	<1.1	<2.85	<3.35 UJ	<1.85	<1.05	<0.8	<0.8
FCDL#5-SS27S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067 UJ	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS28S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067 UJ	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS29S-01	9/24/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067 UJ	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS30S-01	9/24/95	1	<3.5	<2	<2	<1.1	<2.85	<3.35 UJ	<1.85	<1.05	<0.8	<0.8
FCDL#5-SS31S-01	9/23/95	1	<0.07	<0.04	<0.04	<0.022	<0.057	<0.067 UJ	<0.037	<0.021	<0.016	<0.016
FCDL#5-SS32S-01	9/23/95	1	<0.7	<0.4	<0.4	<0.22	<0.57	<0.67	<0.37	<0.21	<0.16	<0.16
FCDL#5-SS33S-01	9/24/95	1	<0.14	<0.08	<0.08	<0.044	<0.114	<0.134 UJ	<0.074	<0.042	<0.032	<0.032
FCDL#5-TP01S-01	4/23/96	3	<2.8	<0.92	<0.76	<0.68	<0.76	<8.4	<0.88	<0.68	<0.8	<0.68
FCDL#5-TP01S-02	4/23/96	3.5	<14	<4.6	<3.8	<3.4	<3.8	<42	<4.4	<3.4	<4	<3.4
FCDL#5-TP02S-01	4/23/96	1.5	<7	<2.3	<1.9	<1.7	<1.9	<21 UJ	<2.2	<1.7	<2	<1.7
FCDL#5-TP02S-02	4/23/96	2.5	<2.8	<0.92	<0.76	<0.68	<0.76	<8.4 UJ	<0.88	<0.68	<0.8	<0.68
FCDL#5-TP03S-01	4/23/96	3.5	<3.5	<1.15	<0.95	<0.85	<0.95	<10.5 UJ	<1.1	<0.85	<1	<0.85
FCDL#5-SB01S-01	5/3/96	0.5	<0.07	<0.023	<0.019	<0.017	<0.019	<0.21	<0.022	<0.017	<0.02	<0.017
FCDL#5-SB01S-02	5/3/96	2.5	<0.07	<0.023	<0.019	<0.017	<0.019	<0.21	<0.022	<0.017	<0.02	<0.017
FCDL#5-SB02S-01	5/3/96	0.5	<0.07	<0.023	<0.019	<0.017	<0.019	<0.21	<0.022	<0.017	<0.02	<0.017
FCDL#5-SB02S-02	5/3/96	2.5	<0.07	<0.023	<0.019	<0.017	<0.019	<0.21	<0.022	<0.017	<0.02	<0.017
FCDL#5-SB02S-03	5/3/96	5	<0.07	<0.023	<0.019	<0.017	<0.019	<0.21	<0.022	<0.017	<0.02	<0.017
FCDL#5-SB03S-01	5/3/96	0.5	<0.35	<0.115	<0.095	<0.085	<0.095	<1.05	<0.11	<0.085	<0.1	<0.085
FCDL#5-SB03S-02	5/3/96	2.5	<0.14	<0.046	<0.038	<0.034	<0.038	<0.42	<0.044	<0.034	<0.04	<0.034
FCDL#5-SB03S-03	5/3/96	5	<7	<2.3	<1.9	<1.7	<1.9	<21	<2.2	<1.7	<2	<1.7
FCDL#5-SB03S-04	5/3/96	10	<7	<2.3	<1.9	<1.7	<1.9	<21	<2.2	<1.7	<2	<1.7
FCDL#5-SB04S-03	5/3/96	5.5	<0.07	<0.023	<0.019	<0.017	<0.019	<0.21	<0.022	<0.017	<0.02	<0.017

Analyses	48	48	48	48	48	48	48	48	48	48	48
Detections	0	0	0	0	0	0	0	0	0	0	0
Maximum Concentration	0	0	0	0	0	0	0	0	0	0	0
Arizona HBGL - Nonresidential	12250	42000	504	1225	8050	805	8	420	32900	2030	
Arizona HBGL - Nonresidential Hits	0	0	0	0	0	0	0	0	0	0	

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	2-Methylnaphthalene	2-Methylphenol	2-Naphthylamine	2-Nitroaniline	2-Nitrophenol	2-Picoline	3,3-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Aminobiphenyl
		CRQL	0.33	0.33	0.33	1.7	0.33	0.33	0.66	1.7	1.7	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS02S-01	9/23/95	1	<0.04	<0.021	<0.031 UJ	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS03S-01	9/23/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS04S-01	9/23/95	1	<0.04	<0.021	<0.031 UJ	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS05S-01	9/24/95	1	<0.04	<0.021	<0.031 UJ	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS06S-01	9/24/95	1	<0.04	<0.021	<0.031 UJ	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS07S-01	9/23/95	1	<0.04	<0.021	<0.031 UJ	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS08S-01	9/23/95	1	8.8 J	<2.1	<3.1	<2.5	<2.9	<4.6	<4.3	<5.3	<3.3	<1.7
FCDL#5-SS09S-01	9/23/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS10S-01	9/24/95	1	0.32 J	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS11S-01	9/24/95	1	2.4	<0.105	<0.155	<0.125	<0.145	<0.23	<0.215	<0.265	<0.165	<0.085
FCDL#5-SS12S-01	9/24/95	1	0.094 J	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS13S-01	9/23/95	1	<0.04	<0.021	<0.031 UJ	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS14S-01	9/23/95	1	<0.04	<0.021	<0.031 UJ	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS15S-01	9/23/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS16S-01	9/23/95	1	1.9 J	<0.21	<0.31	<0.25	<0.29	<0.46	<0.43	<0.53	<0.33	<0.17
FCDL#5-SS17S-01	9/24/95	1	0.51 J	<0.21	<0.31	<0.25	<0.29	<0.46	<0.43	<0.53	<0.33	<0.17
FCDL#5-SS18S-01	9/24/95	1	15 J	<1.05	<1.55	<1.25	<1.45	<2.3	<2.15	<2.65	<1.65	<0.85
FCDL#5-SS19S-01	9/24/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS20S-01	9/24/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS21S-01	9/24/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS22S-01	9/24/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS23S-01	9/24/95	1	1.2 J	<0.21	<0.31	<0.25	<0.29	<0.46	<0.43	<0.53	<0.33	<0.17
FCDL#5-SS24S-01	9/24/95	1	1.1 J	<0.21	<0.31	<0.25	<0.29	<0.46	<0.43	<0.53	<0.33	<0.17
FCDL#5-SS25S-01	9/24/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	2-Methylnaphthalene	2-Methylphenol	2-Naphthylamine	2-Nitroaniline	2-Nitrophenol	2-Picoline	3,3-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Aminobiphenyl
		CRQL	0.33	0.33	0.33	1.7	0.33	0.33	0.66	1.7	1.7	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS26S-01	9/24/95	1	14 J	<1.05	<1.55	<1.25	<1.45	<2.3	<2.15 UJ	<2.65 UJ	<1.65	<0.85
FCDL#5-SS27S-01	9/24/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS28S-01	9/24/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS29S-01	9/24/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS30S-01	9/24/95	1	43	<1.05	<1.55	<1.25	<1.45	<2.3	<2.15	<2.65	<1.65	<0.85
FCDL#5-SS31S-01	9/23/95	1	<0.04	<0.021	<0.031	<0.025	<0.029	<0.046	<0.043	<0.053	<0.033	<0.017
FCDL#5-SS32S-01	9/23/95	1	<0.4	<0.21	<0.31	<0.25	<0.29	<0.46	<0.43 UJ	<0.53 UJ	<0.33	<0.17
FCDL#5-SS33S-01	9/24/95	1	<0.08	<0.042	<0.062	<0.05	<0.058	<0.092	<0.086	<0.106	<0.066	<0.034
FCDL#5-TP01S-01	4/23/96	3	5.8 J	<0.68	<1.24	<5.6	<0.68	<1.84	<2.12	<11.2	<6.8	<0.68
FCDL#5-TP01S-02	4/23/96	3.5	9.3 J	<3.4	<6.2	<28	<3.4	<9.2	<10.6	<56	<34	<3.4
FCDL#5-TP02S-01	4/23/96	1.5	9.4 J	<1.7	<3.1	<14	<1.7	<4.6	<5.3	<28	<17	<1.7
FCDL#5-TP02S-02	4/23/96	2.5	3.8 J	<0.68	<1.24	<5.6	<0.68	<1.84	<2.12	<11.2	<6.8	<0.68
FCDL#5-TP03S-01	4/23/96	3.5	11 J	<0.85	<1.55	<7	<0.85	<2.3	<2.65	<14	<8.5	<0.85
FCDL#5-SB01S-01	5/3/96	0.5	<0.02	<0.017	<0.031	<0.14	<0.017	<0.046	<0.053	<0.28	<0.17	<0.017
FCDL#5-SB01S-02	5/3/96	2.5	<0.02	<0.017	<0.031	<0.14	<0.017	<0.046	<0.053	<0.28	<0.17	<0.017
FCDL#5-SB02S-01	5/3/96	0.5	<0.02	<0.017	<0.031	<0.14	<0.017	<0.046	<0.053	<0.28	<0.17	<0.017
FCDL#5-SB02S-02	5/3/96	2.5	<0.02	<0.017	<0.031	<0.14	<0.017	<0.046	<0.053	<0.28	<0.17	<0.017
FCDL#5-SB02S-03	5/3/96	5	<0.02	<0.017	<0.031	<0.14	<0.017	<0.046	<0.053	<0.28	<0.17	<0.017
FCDL#5-SB03S-01	5/3/96	0.5	0.58 J	<0.085	<0.155	<0.7	<0.085	<0.23	<0.265	<1.4	<0.85	<0.085
FCDL#5-SB03S-02	5/3/96	2.5	<0.04	<0.034	<0.062	<0.28	<0.034	<0.092	<0.106	<0.56	<0.34	<0.034
FCDL#5-SB03S-03	5/3/96	5	26 J	<1.7	<3.1	<14	<1.7	<4.6	<5.3	<28	<17	<1.7
FCDL#5-SB03S-04	5/3/96	10	14 J	<1.7	<3.1	<14	<1.7	<4.6	<5.3	<28	<17	<1.7
FCDL#5-SB04S-03	5/3/96	5.5	0.05 J	<0.017	<0.031	<0.14	<0.017	<0.046	<0.053	<0.28	<0.17	<0.017

Analyses	48	48	48	48	48	48	48	48	48	48	48
Detections	20	0	0	0	0	0	0	0	0	0	0
Maximum Concentration	43	0	0	0	0	0	0	0	0	0	0
Arizona HBGL - Nonresidential		2030		25			13				
Arizona HBGL - Nonresidential Hits		0		0			0				

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	4-Bromophenyl phenyl ether	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	7,12-Dimethylbenz(a)-anthracene	a,a-Dimethylphenethyl-amine	Acenaphthene
		CRQL	0.33	0.33	0.33	0.33	0.33	1.7	1.7	0.33	0.002	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15 UJ	<0.013
FCDL#5-SS02S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037 UJ	<0.11	<0.018	<0.15 UJ	<0.013
FCDL#5-SS03S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15 UJ	0.23 J
FCDL#5-SS04S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018 UJ	<0.15 UJ	<0.013
FCDL#5-SS05S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018 UJ	<0.15 UJ	<0.013
FCDL#5-SS06S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018 UJ	<0.15 UJ	<0.013
FCDL#5-SS07S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018 UJ	<0.15 UJ	<0.013
FCDL#5-SS08S-01	9/23/95	1	<2.6	<1.4	<5	<2.7	<3.7	<3.7	<11	<1.8	<15 UJ	31 J
FCDL#5-SS09S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15 UJ	0.1 J
FCDL#5-SS10S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15 UJ	0.61
FCDL#5-SS11S-01	9/24/95	1	<0.13	<0.07	<0.25	<0.135	<0.185	<0.185	<0.55	<0.09	<0.75	4.2
FCDL#5-SS12S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15 UJ	0.34 J
FCDL#5-SS13S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018 UJ	<0.15 UJ	<0.013
FCDL#5-SS14S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018 UJ	<0.15 UJ	<0.013
FCDL#5-SS15S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15	<0.013
FCDL#5-SS16S-01	9/23/95	1	<0.26	<0.14	<0.5	<0.27	<0.37	<0.37	<1.1	<0.18	<1.5 UJ	5.7
FCDL#5-SS17S-01	9/24/95	1	<0.26	<0.14	<0.5	<0.27	<0.37	<0.37	<1.1	<0.18	<1.5 UJ	2.7
FCDL#5-SS18S-01	9/24/95	1	<1.3	<0.7	<2.5	<1.35	<1.85	<1.85	<5.5	<0.9	<7.5 UJ	51
FCDL#5-SS19S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15	0.028 J
FCDL#5-SS20S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15	0.016 J
FCDL#5-SS21S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15	<0.013
FCDL#5-SS22S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15	<0.013
FCDL#5-SS23S-01	9/24/95	1	<0.26	<0.14	<0.5	<0.27	<0.37	<0.37	<1.1 UJ	<0.18	<1.5 UJ	5
FCDL#5-SS24S-01	9/24/95	1	<0.26	<0.14	<0.5	<0.27	<0.37	<0.37	<1.1	<0.18	<1.5 UJ	7
FCDL#5-SS25S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15	0.038 J

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	4-Bromophenyl phenyl ether	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl phenyl ether	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	7,12-Dimethylbenz(a)-anthracene	a,a-Dimethylphenethyl-amine	Acenaphthene
		CRQL	0.33	0.33	0.33	0.33	0.33	1.7	1.7	0.33	0.002	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS26S-01	9/24/95	1	<1.3	<0.7	<2.5	<1.35	<1.85	<1.85 UJ	<5.5 UJ	<0.9	<7.5 UJ	50 J
FCDL#5-SS27S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15 UJ	<0.013
FCDL#5-SS28S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15 UJ	<0.013
FCDL#5-SS29S-01	9/24/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15 UJ	<0.013
FCDL#5-SS30S-01	9/24/95	1	<1.3	<0.7	<2.5	<1.35	<1.85	<1.85	<5.5	<0.9	<7.5 UJ	120
FCDL#5-SS31S-01	9/23/95	1	<0.026	<0.014	<0.05	<0.027	<0.037	<0.037	<0.11	<0.018	<0.15 UJ	<0.013
FCDL#5-SS32S-01	9/23/95	1	<0.26	<0.14	<0.5	<0.27	<0.37	<0.37 UJ	<1.1 UJ	<0.18	<1.5 UJ	1.4 J
FCDL#5-SS33S-01	9/24/95	1	<0.052	<0.028	<0.1	<0.054	<0.074	<0.074	<0.22	<0.036	<0.3 UJ	0.26 J
FCDL#5-TP01S-01	4/23/96	3	<0.68	<1	<2.6	<1.12	<0.84	<11.6	<11.2	<0.72	<6 UJ	14 J
FCDL#5-TP01S-02	4/23/96	3.5	<3.4	<5	<13	<5.6	<4.2	<58	<56	<3.6	<30 UJ	55 J
FCDL#5-TP02S-01	4/23/96	1.5	<1.7	<2.5	<6.5	<2.8	<2.1	<29	<28	<1.8	<15 UJ	40 J
FCDL#5-TP02S-02	4/23/96	2.5	<0.68	<1	<2.6	<1.12	<0.84	<11.6	<11.2	<0.72	<6 UJ	15 J
FCDL#5-TP03S-01	4/23/96	3.5	<0.85	<1.25	<3.25	<1.4	<1.05	<14.5	<14	<0.9	<7.5 UJ	29 J
FCDL#5-SB01S-01	5/3/96	0.5	<0.017	<0.025	<0.065	<0.028	<0.021	<0.29	<0.28	<0.018	<0.15 UJ	<0.021
FCDL#5-SB01S-02	5/3/96	2.5	<0.017	<0.025	<0.065	<0.028	<0.021	<0.29	<0.28	<0.018	<0.15 UJ	<0.021
FCDL#5-SB02S-01	5/3/96	0.5	<0.017	<0.025	<0.065	<0.028	<0.021	<0.29	<0.28	<0.018	<0.15 UJ	<0.021
FCDL#5-SB02S-02	5/3/96	2.5	<0.017	<0.025	<0.065	<0.028	<0.021	<0.29	<0.28	<0.018	<0.15 UJ	<0.021
FCDL#5-SB02S-03	5/3/96	5	<0.017	<0.025	<0.065	<0.028	<0.021	<0.29	<0.28	<0.018	<0.15 UJ	<0.021
FCDL#5-SB03S-01	5/3/96	0.5	<0.085	<0.125	<0.325	<0.14	<0.105	<1.45	<1.4	<0.09 UJ	<0.75	2.2
FCDL#5-SB03S-02	5/3/96	2.5	<0.034	<0.05	<0.13	<0.056	<0.042	<0.58	<0.56	<0.036	<0.3	0.38 J
FCDL#5-SB03S-03	5/3/96	5	<1.7	<2.5	<6.5	<2.8	<2.1	<29	<28	<1.8 UJ	<15	74 J
FCDL#5-SB03S-04	5/3/96	10	<1.7	<2.5	<6.5	<2.8	<2.1	<29	<28	<1.8 UJ	<15	47
FCDL#5-SB04S-03	5/3/96	5.5	<0.017	<0.025	<0.065	<0.028	<0.021	<0.29	<0.28	<0.018	<0.15 UJ	0.27 J

Analyses	48	48	48	48	48	48	48	48	48	48	48
Detections	0	0	0	0	0	0	0	0	0	0	28
Maximum Concentration	0	0	0	0	0	0	0	0	0	0	120
Arizona HBGL - Nonresidential			1645		2030						24500
Arizona HBGL - Nonresidential Hits			0		0						0

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Acenaphthylene	Acetophenone	Aniline	Anthracene	Benzidine	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene
		CRQL	0.33	0.33	0.33	0.33	1.7	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS02S-01	9/23/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS03S-01	9/23/95	1	0.18 J	<0.014	<0.057	0.7	<0.04 R	2.7	2.4	3.9	1.6	<0.018
FCDL#5-SS04S-01	9/23/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS05S-01	9/24/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS06S-01	9/24/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS07S-01	9/23/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS08S-01	9/23/95	1	6.1 J	<1.4	<5.7	93	<4 R	160	110	160	55	<1.8
FCDL#5-SS09S-01	9/23/95	1	<0.018	<0.014	<0.057	0.25 J	<0.04 R	0.74	0.52	0.78	0.32 J	<0.018
FCDL#5-SS10S-01	9/24/95	1	0.052 J	<0.014	<0.057	1.1	<0.04 R	2	1.5	1.6	0.83 J	<0.018
FCDL#5-SS11S-01	9/24/95	1	0.52 J	<0.07	<0.285	8.9	<0.2 R	14	9.7	14	5.2	<0.09
FCDL#5-SS12S-01	9/24/95	1	0.043 J	<0.014	<0.057	0.74	<0.04 R	1.9	1.2	2.1	0.72	<0.018
FCDL#5-SS13S-01	9/23/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS14S-01	9/23/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	0.041 J	0.07 J	<0.021	<0.018
FCDL#5-SS15S-01	9/23/95	1	<0.018	<0.014	<0.057	0.049 J	<0.04 R	0.21 J	0.17 J	0.27 J	0.099 J	<0.018
FCDL#5-SS16S-01	9/23/95	1	<0.18	<0.14	<0.57	10	<0.4 R	22	15	20	4.7	6.2
FCDL#5-SS17S-01	9/24/95	1	<0.18	<0.14	<0.57	7.9	<0.4 R	32	26	37	6.6	16
FCDL#5-SS18S-01	9/24/95	1	<0.9	<0.7	<2.85	110	<2 R	310	210	290	59	92
FCDL#5-SS19S-01	9/24/95	1	<0.018	<0.014	<0.057	0.068 J	<0.04 R	0.19 J	0.14 J	0.19 J	0.047 J	0.055 J
FCDL#5-SS20S-01	9/24/95	1	<0.018	<0.014	<0.057	0.045 J	<0.04 R	0.44	0.37	0.6	0.14 J	0.15 J
FCDL#5-SS21S-01	9/24/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS22S-01	9/24/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	0.054 J	0.035 J	0.053 J	<0.021	<0.018
FCDL#5-SS23S-01	9/24/95	1	<0.18	<0.14	<0.57	6.6	<0.4 R	12	8.9	12	2.7 J	2.7 J
FCDL#5-SS24S-01	9/24/95	1	0.3 J	<0.14	<0.57	16	<0.4 R	34	20	29	4.8	9.3
FCDL#5-SS25S-01	9/24/95	1	<0.018	<0.014	<0.057	0.11 J	<0.04 R	0.52	0.4	0.53	0.14 J	0.21 J

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Acenaphthylene	Acetophenone	Aniline	Anthracene	Benzidine	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene
		CRQL	0.33	0.33	0.33	0.33	1.7	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS26S-01	9/24/95	1	3.1 J	<0.7	<2.85	120	<2 R	250	160	230	42	83
FCDL#5-SS27S-01	9/24/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS28S-01	9/24/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	<0.02	<0.014	<0.022	<0.021	<0.018
FCDL#5-SS29S-01	9/24/95	1	<0.018	<0.014	<0.057	<0.016	<0.04 R	0.052 J	0.04 J	<0.022	<0.021	<0.018
FCDL#5-SS30S-01	9/24/95	1	3.3 J	<0.7	<2.85	260	<2 R	450	300	430	74	150
FCDL#5-SS31S-01	9/23/95	1	<0.018	<0.014	<0.057	0.017 J	<0.04 R	0.11 J	0.083 J	0.1 J	0.043 J	0.048 J
FCDL#5-SS32S-01	9/23/95	1	<0.18	<0.14	<0.57	3.7	<0.4 R	15	10	16	4.1 UJ	4.8
FCDL#5-SS33S-01	9/24/95	1	<0.036	<0.028	<0.114	0.42 J	<0.08 R	1.8	1.3	1.9	0.6 J	<0.036
FCDL#5-TP01S-01	4/23/96	3	<1	<0.56	<1	33	<21.2	63	56	87	26	<0.68
FCDL#5-TP01S-02	4/23/96	3.5	<5	<2.8	<5	180 J	<106	350 J	290 J	510 J	150 J	<3.4
FCDL#5-TP02S-01	4/23/96	1.5	<2.5	<1.4	<2.5	120	<53	330	260	310	96 J	<1.7
FCDL#5-TP02S-02	4/23/96	2.5	<1	<0.56	<1	44	<21.2	83	73	91	27 J	<0.68
FCDL#5-TP03S-01	4/23/96	3.5	<1.25	<0.7	<1.25	67 J	<26.5	110 J	98 J	160 J	32 J	<0.85
FCDL#5-SB01S-01	5/3/96	0.5	<0.025	<0.014	<0.025	<0.021	<0.53	<0.017	<0.018	<0.017	<0.017	<0.017
FCDL#5-SB01S-02	5/3/96	2.5	<0.025	<0.014	<0.025	<0.021	<0.53	<0.017	<0.018	<0.017	<0.017	<0.017
FCDL#5-SB02S-01	5/3/96	0.5	<0.025	<0.014	<0.025	<0.021	<0.53	<0.017	<0.018	<0.017	<0.017	<0.017
FCDL#5-SB02S-02	5/3/96	2.5	<0.025	<0.014	<0.025	<0.021	<0.53	<0.017	<0.018	<0.017	<0.017	<0.017
FCDL#5-SB02S-03	5/3/96	5	<0.025	<0.014	<0.025	<0.021	<0.53	<0.017	<0.018	<0.017	<0.017	<0.017
FCDL#5-SB03S-01	5/3/96	0.5	<0.125	<0.07	<0.125	8	<2.65	13	12	18	7.2	<0.085
FCDL#5-SB03S-02	5/3/96	2.5	<0.05	<0.028	<0.05	1.3	<1.06	2.2	2.1	3.3	1.1	<0.034
FCDL#5-SB03S-03	5/3/96	5	<2.5	<1.4	<2.5	190 J	<53	300 J	220 J	360 J	150 J	<1.7
FCDL#5-SB03S-04	5/3/96	10	<2.5	<1.4	<2.5	120	<53	190	160	250	98	<1.7
FCDL#5-SB04S-03	5/3/96	5.5	<0.025	<0.014	<0.025	0.82 J	<0.53	1.5 J	1.2 J	2.2 J	0.64 J	<0.017

Analyses	48	48	48	48	48	48	48	48	48	48	48
Detections	8	0	0	30	0	32	33	32	30	12	
Maximum Concentration	6.1	0	0	260	0	510	300	510	150	150	
Arizona HBGL - Nonresidential	24500	42000	1008	122500	0.025	4.6	0.8	4.6		4.6	
Arizona HBGL - Nonresidential Hits	0	0	0	0	0	18	24	18		7	

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Benzoic acid	Benzyl alcohol	bis(2-Chloroethoxy)-methane	bis(2-Chloroethyl) ether	bis(2-Chloroisopropyl)-ether	bis(2-Ethylhexyl)-phthalate	Butyl benzyl phthalate	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate
		CRQL	1.7	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	0.029 J	<0.028	<0.037	<0.22	<0.019
FCDL#5-SS02S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	<0.037	<0.22	<0.019
FCDL#5-SS03S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	0.072 J	<0.028	3.1	<0.22	<0.019
FCDL#5-SS04S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	<0.037	<0.22	<0.019
FCDL#5-SS05S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	0.036 J	<0.028	<0.037	<0.22	<0.019
FCDL#5-SS06S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	<0.037	<0.22	<0.019
FCDL#5-SS07S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	<0.037	<0.22	<0.019
FCDL#5-SS08S-01	9/23/95	1	<4.7	<2.1	<1.9	<1.3	<2	<2.6	<2.8	140	<22	<1.9
FCDL#5-SS09S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	0.67	<0.22	<0.019
FCDL#5-SS10S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	2	<0.22	<0.019
FCDL#5-SS11S-01	9/24/95	1	<0.235	<0.105	<0.095	<0.065	<0.1	0.16 J	<0.14	13	<1.1	<0.095
FCDL#5-SS12S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	1.9	<0.22	<0.019
FCDL#5-SS13S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	0.12 J	<0.028	<0.037	<0.22	0.023 J
FCDL#5-SS14S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	0.062 J	<0.22	<0.019
FCDL#5-SS15S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	0.2 J	<0.22	<0.019
FCDL#5-SS16S-01	9/23/95	1	<0.47	<0.21	<0.19	<0.13	<0.2	<0.26	<0.28	21	<2.2	<0.19
FCDL#5-SS17S-01	9/24/95	1	<0.47	<0.21	<0.19	<0.13	<0.2	<0.26	<0.28	30	<2.2	<0.19
FCDL#5-SS18S-01	9/24/95	1	<2.35	<1.05	<0.95	<0.65	<1	<1.3	<1.4	260	<11	<0.95
FCDL#5-SS19S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026 UJ	<0.028 UJ	0.2 J	<0.22	<0.019
FCDL#5-SS20S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026 UJ	<0.028 UJ	0.5	<0.22	<0.019
FCDL#5-SS21S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026 UJ	<0.028 UJ	<0.037	<0.22	<0.019
FCDL#5-SS22S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026 UJ	<0.028 UJ	0.052 J	<0.22	<0.019
FCDL#5-SS23S-01	9/24/95	1	<0.47	<0.21	<0.19	<0.13	<0.2	<0.26	<0.28	11	<2.2	<0.19
FCDL#5-SS24S-01	9/24/95	1	<0.47	<0.21	<0.19	<0.13	<0.2	<0.26	<0.28	28	<2.2	<0.19
FCDL#5-SS25S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026 UJ	<0.028 UJ	0.52	<0.22	<0.019

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Benzoic acid	Benzyl alcohol	bis(2-Chloroethoxy)-methane	bis(2-Chloroethyl) ether	bis(2-Chloroisopropyl)-ether	bis(2-Ethylhexyl)-phthalate	Butyl benzyl phthalate	Chrysene	Di-n-butyl phthalate	Di-n-octyl phthalate
		CRQL	1.7	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS26S-01	9/24/95	1	<2.35	<1.05	<0.95	<0.65	<1	<1.3	<1.4	240	<11	<0.95
FCDL#5-SS27S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	<0.037	<0.22	<0.019
FCDL#5-SS28S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	<0.037	<0.22	<0.019
FCDL#5-SS29S-01	9/24/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	0.055 J	<0.22	<0.019
FCDL#5-SS30S-01	9/24/95	1	<2.35	<1.05	<0.95	<0.65	<1	<1.3	<1.4	460	<11	<0.95
FCDL#5-SS31S-01	9/23/95	1	<0.047	<0.021	<0.019	<0.013	<0.02	<0.026	<0.028	0.11 J	<0.22	<0.019
FCDL#5-SS32S-01	9/23/95	1	<0.47	<0.21	<0.19	<0.13	<0.2	<0.26	<0.28	14	<2.2	<0.19
FCDL#5-SS33S-01	9/24/95	1	<0.094	<0.042	<0.038	<0.026	<0.04	<0.052	<0.056	1.8	<0.44	<0.038
FCDL#5-TP01S-01	4/23/96	3	<4.4	<1.04	<0.8	<0.8	<0.76	<0.92	<0.68	56	<1.96	<1.36
FCDL#5-TP01S-02	4/23/96	3.5	<22	<5.2	<4	<4	<3.8	<4.6	<3.4	330 J	<9.8	<6.8
FCDL#5-TP02S-01	4/23/96	1.5	<11	<2.6	<2	<2	<1.9	<2.3	<1.7	270	<4.9	<3.4
FCDL#5-TP02S-02	4/23/96	2.5	<4.4	<1.04	<0.8	<0.8	<0.76	<0.92	<0.68	81	<1.96	<1.36
FCDL#5-TP03S-01	4/23/96	3.5	<5.5	<1.3	<1	<1	<0.95	<1.15	<0.85	110 J	<2.45	<1.7
FCDL#5-SB01S-01	5/3/96	0.5	<0.11	<0.026	<0.02	<0.02	<0.019	<0.023	<0.017	<0.017	<0.049	<0.034
FCDL#5-SB01S-02	5/3/96	2.5	<0.11	<0.026	<0.02	<0.02	<0.019	0.39 U	<0.017	<0.017	<0.049	<0.034
FCDL#5-SB02S-01	5/3/96	0.5	<0.11	<0.026	<0.02	<0.02	<0.019	<0.023	<0.017	<0.017	<0.049	<0.034
FCDL#5-SB02S-02	5/3/96	2.5	<0.11	<0.026	<0.02	<0.02	<0.019	0.37 U	<0.017	<0.017	<0.049	<0.034
FCDL#5-SB02S-03	5/3/96	5	<0.11	<0.026	<0.02	<0.02	<0.019	0.37 U	<0.017	<0.017	<0.049	<0.034
FCDL#5-SB03S-01	5/3/96	0.5	<0.55	<0.13	<0.1	<0.1	<0.095	<0.115	<0.085	13	<0.245	<0.17
FCDL#5-SB03S-02	5/3/96	2.5	<0.22	<0.052	<0.04	<0.04	<0.038	<0.046	<0.034	2.4	<0.098	<0.068
FCDL#5-SB03S-03	5/3/96	5	<11	<2.6	<2	<2	<1.9	<2.3	<1.7	250 J	<4.9	<3.4
FCDL#5-SB03S-04	5/3/96	10	<11	<2.6	<2	<2	<1.9	<2.3	<1.7	170	<4.9	<3.4
FCDL#5-SB04S-03	5/3/96	5.5	<0.11	<0.026	<0.02	<0.02	<0.019	<0.023	<0.017	1.3 J	<0.049	<0.034

Analyses	48	48	48	48	48	48	48	48	48	48	48
Detections	0	0	0	0	0	8	0	33	0	1	
Maximum Concentration	0	0	0	0	0	0.39	0	410	0	0.023	
Arizona HBGL - Nonresidential	1645000	122500		5	67	407	20300	462	42000	8050	
Arizona HBGL - Nonresidential Hits	0	0		0	0	0	0	0	0	0	

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Dibenz(a,h)anthracene	Dibenz(a,j)acridine	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Diphenylamine	Ethyl methanesulfonate	Fluoranthene	Fluorene	Hexachlorobenzene
		CRQL	0.33		0.33	0.33	0.33	1.7	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	<0.024	<0.013	<0.023
FCDL#5-SS02S-01	9/23/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014 UJ	<0.024	<0.013	<0.023
FCDL#5-SS03S-01	9/23/95	1	0.47	<0.014	0.067 J	<0.027	<0.024	<0	<0.014	5.4	0.2 J	<0.023
FCDL#5-SS04S-01	9/23/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	<0.024	<0.013	<0.023
FCDL#5-SS05S-01	9/24/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	<0.024	<0.013	<0.023
FCDL#5-SS06S-01	9/24/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	<0.024	<0.013	<0.023
FCDL#5-SS07S-01	9/23/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	<0.024	<0.013	<0.023
FCDL#5-SS08S-01	9/23/95	1	18 J	<1.4	18 J	<2.7	<2.4	<0	<1.4	310	39	<2.3
FCDL#5-SS09S-01	9/23/95	1	0.1 J	<0.014	0.047 J	<0.027	<0.024	<0	<0.014	1.4	0.1 J	<0.023
FCDL#5-SS10S-01	9/24/95	1	0.26 J	<0.014	0.38	<0.027	<0.024	<0	<0.014	4.5	0.7	<0.023
FCDL#5-SS11S-01	9/24/95	1	1.5 J	<0.07	3.2	<0.135	<0.12	<0	<0.07	34	5.4	<0.115
FCDL#5-SS12S-01	9/24/95	1	0.22 J	<0.014	0.18 J	<0.027	<0.024	<0	<0.014	4.2	0.36 J	<0.023
FCDL#5-SS13S-01	9/23/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	0.059 J	<0.013	<0.023
FCDL#5-SS14S-01	9/23/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	0.12 J	<0.013	<0.023
FCDL#5-SS15S-01	9/23/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	0.33 J	<0.013	<0.023
FCDL#5-SS16S-01	9/23/95	1	<0.24	<0.14 UJ	3 J	<0.27	<0.24	<0	<0.14	46	5.8	<0.23
FCDL#5-SS17S-01	9/24/95	1	2.4	<0.14 UJ	1.3 J	<0.27	<0.24	<0	<0.14	59	2.8	<0.23
FCDL#5-SS18S-01	9/24/95	1	17 J	<0.7 UJ	29	<1.35	<1.2	<0	<0.7	740	57	<1.15
FCDL#5-SS19S-01	9/24/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	0.44 J	<0.013	<0.023
FCDL#5-SS20S-01	9/24/95	1	0.042 J	<0.014	<0.022	<0.027	<0.024	<0	<0.014	0.82	<0.013	<0.023
FCDL#5-SS21S-01	9/24/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	<0.024	<0.013	<0.023
FCDL#5-SS22S-01	9/24/95	1	<0.024	<0.014	<0.022	<0.027	<0.024	<0	<0.014	0.11 J	<0.013	<0.023
FCDL#5-SS23S-01	9/24/95	1	0.97 J	<0.14 UJ	2.5 J	<0.27	<0.24	<0	<0.14	32	4.9	<0.23
FCDL#5-SS24S-01	9/24/95	1	<0.24	<0.14 UJ	<0.22	<0.27	<0.24	<0	<0.14	68	7.4	<0.23
FCDL#5-SS25S-01	9/24/95	1	0.049 J	<0.014	<0.022	<0.027	<0.024	<0	<0.014	0.97	<0.013	<0.023

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Dibenz(a,h)anthracene	Dibenz(a,j)acridine	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Diphenylamine	Ethyl methanesulfonate	Fluoranthene	Fluorene	Hexachlorobenzene
		CRQL	0.33		0.33	0.33	0.33	1.7	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS26S-01	9/24/95	1	13 J	<0.7 UJ	29	<1.35	<1.2	<0	<0.7	520	58	<1.15
FCDL#5-SS27S-01	9/24/95	1	<0.024	<0.014 UJ	<0.022	<0.027	<0.024	<0	<0.014	<0.024	<0.013	<0.023
FCDL#5-SS28S-01	9/24/95	1	<0.024	<0.014 UJ	<0.022	<0.027	<0.024	<0	<0.014	<0.024	<0.013	<0.023
FCDL#5-SS29S-01	9/24/95	1	<0.024	<0.014 UJ	<0.022	<0.027	<0.024	<0	<0.014	0.099 J	<0.013	<0.023
FCDL#5-SS30S-01	9/24/95	1	21	<0.7 UJ	81	<1.35	<1.2	<0	<0.7	1100	150	<1.15
FCDL#5-SS31S-01	9/23/95	1	<0.024	<0.014 UJ	<0.022	<0.027	<0.024	<0	<0.014	0.2 J	<0.013	<0.023
FCDL#5-SS32S-01	9/23/95	1	1.4 J	<0.14 UJ	0.77 J	<0.27	<0.24	<0	<0.14	25	1.2 J	<0.23
FCDL#5-SS33S-01	9/24/95	1	0.18 J	<0.028 UJ	0.12 J	<0.054	<0.048	<0	<0.028	3.8	0.25 J	<0.046
FCDL#5-TP01S-01	4/23/96	3	<0.68	<0.56	9.1 J	<1.12	<0.96	<0.68	<0.56	120	17	<0.68
FCDL#5-TP01S-02	4/23/96	3.5	<3.4	<2.8	35 J	<5.6	<4.8	<3.4	<2.8	710 J	78 J	<3.4
FCDL#5-TP02S-01	4/23/96	1.5	<1.7	<1.4	22 J	<2.8	<2.4	<1.7	<1.4	600	44	<1.7
FCDL#5-TP02S-02	4/23/96	2.5	<0.68	<0.56	8.8 J	<1.12	<0.96	<0.68	<0.56	190	19	<0.68
FCDL#5-TP03S-01	4/23/96	3.5	<0.85	<0.7	18 J	<1.4	<1.2	<0.85	<0.7	230 J	35 J	<0.85
FCDL#5-SB01S-01	5/3/96	0.5	<0.017	<0.014	<0.03	<0.028	<0.024	<0.017	<0.014	<0.039	<0.024	<0.017
FCDL#5-SB01S-02	5/3/96	2.5	<0.017	<0.014	<0.03	<0.028	<0.024	<0.017	<0.014	<0.039	<0.024	<0.017
FCDL#5-SB02S-01	5/3/96	0.5	<0.017	<0.014	<0.03	<0.028	<0.024	<0.017	<0.014	<0.039	<0.024	<0.017
FCDL#5-SB02S-02	5/3/96	2.5	<0.017	<0.014	<0.03	<0.028	<0.024	<0.017	<0.014	<0.039	<0.024	<0.017
FCDL#5-SB02S-03	5/3/96	5	<0.017	<0.014	<0.03	<0.028	<0.024	<0.017	<0.014	<0.039	<0.024	<0.017
FCDL#5-SB03S-01	5/3/96	0.5	2.1 J	<0.07	1.6 J	<0.14	<0.12	<0.085	<0.07	29	2.9	<0.085
FCDL#5-SB03S-02	5/3/96	2.5	0.35 J	<0.028	0.24 J	<0.056	<0.048	<0.034	<0.028	5.8	0.5 J	<0.034
FCDL#5-SB03S-03	5/3/96	5	46 J	<1.4	48 J	<2.8	<2.4	<1.7	<1.4	610 J	96 J	<1.7
FCDL#5-SB03S-04	5/3/96	10	31 J	<1.4	30 J	<2.8	<2.4	<1.7	<1.4	410	58	<1.7
FCDL#5-SB04S-03	5/3/96	5.5	<0.017 UJ	<0.014	0.17 J	<0.028	<0.024	<0.017	<0.014	3.2 J	0.41 J	<0.017

Analyses	48	48	48	48	48	48	48	48	48	48	48
Detections	19	0	24	0	0	0	0	34	25	0	
Maximum Concentration	46	0	81	0	0	0	0	790	150	0	
Arizona HBGL - Nonresidential	0.46			329000	4200000	10150		16450	16450	3.57	
Arizona HBGL - Nonresidential Hits	12			0	0	0		0	0	0	

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	Methyl methanesulfonate	N-Nitroso-di-n-butylamine	N-Nitroso-di-n-propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	N-Nitrosopiperidine
		CRQL	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS02S-01	9/23/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS03S-01	9/23/95	1	<0.021 UJ	<0.033	1.8	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS04S-01	9/23/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS05S-01	9/24/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS06S-01	9/24/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS07S-01	9/23/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS08S-01	9/23/95	1	<2.1 UJ	<3.3	60	<1.8	<3.4	<9.2	<2.2	<9.3	<2	<1.5
FCDL#5-SS09S-01	9/23/95	1	<0.021 UJ	<0.033	0.37 J	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS10S-01	9/24/95	1	<0.021 UJ	<0.033	0.91	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS11S-01	9/24/95	1	<0.105 UJ	<0.165	5.8	<0.09	<0.17	<0.46	<0.11	<0.465	<0.1	<0.075
FCDL#5-SS12S-01	9/24/95	1	<0.021 UJ	<0.033	0.81	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS13S-01	9/23/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS14S-01	9/23/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS15S-01	9/23/95	1	<0.021 UJ	<0.033	0.1 J	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS16S-01	9/23/95	1	<0.21 UJ	<0.33	6	<0.18	<0.34	<0.92	<0.22	<0.93	<0.2	<0.15
FCDL#5-SS17S-01	9/24/95	1	<0.21 UJ	<0.33	7.4	<0.18	<0.34	<0.92	<0.22	<0.93	<0.2	<0.15
FCDL#5-SS18S-01	9/24/95	1	<1.05 UJ	<1.65	66	<0.9	<1.7	<4.6	<1.1	<4.65	<1	<0.75
FCDL#5-SS19S-01	9/24/95	1	<0.021	<0.033	0.061 J	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS20S-01	9/24/95	1	<0.021	<0.033	0.17 J	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS21S-01	9/24/95	1	<0.021	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS22S-01	9/24/95	1	<0.021	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS23S-01	9/24/95	1	<0.21	<0.33	3.7	<0.18	<0.34	<0.92	<0.22	<0.93	<0.2	<0.15
FCDL#5-SS24S-01	9/24/95	1	<0.21 UJ	<0.33	6	<0.18	<0.34	<0.92	<0.22	<0.93	<0.2	<0.15
FCDL#5-SS25S-01	9/24/95	1	<0.021	<0.033	0.19 J	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Hexachlorocyclopentadiene	Hexachloroethane	Indeno(1,2,3-c,d)pyrene	Isophorone	Methyl methanesulfonate	N-Nitroso-di-n-butylamine	N-Nitroso-di-n-propylamine	N-Nitrosodimethylamine	N-Nitrosodiphenylamine	N-Nitrosopiperidine
		CRQL	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS26S-01	9/24/95	1	<1.05 UJ	<1.65	48	<0.9	<1.7	<4.6	<1.1	<4.65	<1	<0.75
FCDL#5-SS27S-01	9/24/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS28S-01	9/24/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS29S-01	9/24/95	1	<0.021 UJ	<0.033	<0.031	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS30S-01	9/24/95	1	<1.05 UJ	<1.65	120	<0.9	<1.7	<4.6	<1.1	<4.65	<1	<0.75
FCDL#5-SS31S-01	9/23/95	1	<0.021 UJ	<0.033	0.05 J	<0.018	<0.034	<0.092	<0.022	<0.093	<0.02	<0.015
FCDL#5-SS32S-01	9/23/95	1	<0.21 UJ	<0.33	4.4 J	<0.18	<0.34	<0.92	<0.22	<0.93	<0.2	<0.15
FCDL#5-SS33S-01	9/24/95	1	<0.042 UJ	<0.066	0.71	<0.036	<0.068	<0.184	<0.044	<0.186	<0.04	<0.03
FCDL#5-TP01S-01	4/23/96	3	<0.72	<0.88	32	<0.8	<1.36	<3.68	<0.72	<1	<0.68	<0.6
FCDL#5-TP01S-02	4/23/96	3.5	<3.6	<4.4	190 J	<4	<6.8	<18.4	<3.6	<5	<3.4	<3
FCDL#5-TP02S-01	4/23/96	1.5	<1.8	<2.2	140	<2	<3.4	<9.2	<1.8	<2.5	<1.7	<1.5
FCDL#5-TP02S-02	4/23/96	2.5	<0.72	<0.88	35	<0.8	<1.36	<3.68	<0.72	<1	<0.68	<0.6
FCDL#5-TP03S-01	4/23/96	3.5	<0.9	<1.1	48 J	<1	<1.7	<4.6	<0.9	<1.25	<0.85	<0.75
FCDL#5-SB01S-01	5/3/96	0.5	<0.018	<0.022	<0.017	<0.02	<0.034	<0.092	<0.018	<0.025	<0.017	<0.015
FCDL#5-SB01S-02	5/3/96	2.5	<0.018	<0.022	<0.017	<0.02	<0.034	<0.092	<0.018	<0.025	<0.017	<0.015
FCDL#5-SB02S-01	5/3/96	0.5	<0.018	<0.022	<0.017	<0.02	<0.034	<0.092	<0.018	<0.025	<0.017	<0.015
FCDL#5-SB02S-02	5/3/96	2.5	<0.018	<0.022	<0.017	<0.02	<0.034	<0.092	<0.018	<0.025	<0.017	<0.015
FCDL#5-SB02S-03	5/3/96	5	<0.018	<0.022	<0.017	<0.02	<0.034	<0.092	<0.018	<0.025	<0.017	<0.015
FCDL#5-SB03S-01	5/3/96	0.5	<0.09	<0.11	8.1	<0.1	<0.17	<0.46	<0.09	<0.125	<0.085	<0.075
FCDL#5-SB03S-02	5/3/96	2.5	<0.036	<0.044	1.3	<0.04	<0.068	<0.184	<0.036	<0.05	<0.034	<0.03
FCDL#5-SB03S-03	5/3/96	5	<1.8	<2.2	170 J	<2	<3.4	<9.2	<1.8	<2.5	<1.7	<1.5
FCDL#5-SB03S-04	5/3/96	10	<1.8	<2.2	110	<2	<3.4	<9.2	<1.8	<2.5	<1.7	<1.5
FCDL#5-SB04S-03	5/3/96	5.5	<0.018	<0.022	0.75 J	<0.02	<0.034	<0.092	<0.018	<0.025	<0.017	<0.015

Analyses	48	48	48	48	48	48	48	48	48	48	48
Detections	0	0	30	0	0	0	0	0	0	0	0
Maximum Concentration	0	0	190	0	0	0	0	0	0	0	0
Arizona HBGL - Nonresidential	2870	340	4.6	4900		1.05	0.8	0.13	1176		
Arizona HBGL - Nonresidential Hits	0	0	16	0		0	0	0	0		

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Nitrobenzene	p-Dimethylaminoazobenzene	Pentachlorobenzene	Pentachloronitrobenzene	Pentachlorophenol	Phenacetin	Phenanthrene	Phenol	Pronamide	Pyrene
		CRQL	0.33	0.33	0.33	1.7	1.7	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	<0.015	<0.02	<0.019	<0.025
FCDL#5-SS02S-01	9/23/95	1	<0.02	<0.0099	<0.019 UJ	<0.066	<0.07	<0.059	<0.015	<0.02	<0.019	<0.025
FCDL#5-SS03S-01	9/23/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	2.1	<0.02	<0.019	6.8
FCDL#5-SS04S-01	9/23/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.024 J	<0.02	<0.019	<0.025
FCDL#5-SS05S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	<0.015	<0.02	<0.019	<0.025
FCDL#5-SS06S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	<0.015	<0.02	<0.019	<0.025
FCDL#5-SS07S-01	9/23/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	<0.015	<0.02	<0.019	<0.025
FCDL#5-SS08S-01	9/23/95	1	<2	<0.99	<1.9	<6.6	<7	<5.9	250	<2	<1.9	340
FCDL#5-SS09S-01	9/23/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.93	<0.02	<0.019	1.4
FCDL#5-SS10S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	3.6	<0.02	<0.019	4.6
FCDL#5-SS11S-01	9/24/95	1	<0.1	<0.0495	<0.095	<0.33	<0.35	<0.295	26	<0.1	<0.095	35
FCDL#5-SS12S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	2.7	<0.02	<0.019	4.2
FCDL#5-SS13S-01	9/23/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.02 J	<0.02	<0.019	0.056 J
FCDL#5-SS14S-01	9/23/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.055 J	<0.02	<0.019	0.11 J
FCDL#5-SS15S-01	9/23/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.16 J	<0.02	<0.019	0.33 J
FCDL#5-SS16S-01	9/23/95	1	<0.2	<0.099	<0.19	<0.66	<0.7	<0.59	38	<0.2	<0.19	51
FCDL#5-SS17S-01	9/24/95	1	<0.2	<0.099	<0.19	<0.66	<0.7	<0.59	27	<0.2	<0.19	58
FCDL#5-SS18S-01	9/24/95	1	<1	<0.495	<0.95	<3.3	<3.5	<2.95	470	<1	<0.95	640
FCDL#5-SS19S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.27 J	<0.02	<0.019	0.36 J
FCDL#5-SS20S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.23 J	<0.02	<0.019	0.72
FCDL#5-SS21S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	<0.015	<0.02	<0.019	<0.025
FCDL#5-SS22S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.056 J	<0.02	<0.019	0.1 J
FCDL#5-SS23S-01	9/24/95	1	<0.2	<0.099	<0.19	<0.66	<0.7	<0.59	28	<0.2	<0.19	34
FCDL#5-SS24S-01	9/24/95	1	<0.2	<0.099	<0.19	<0.66	<0.7	<0.59	49	<0.2	<0.19	71
FCDL#5-SS25S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.48	<0.02	<0.019	0.84

Former Construction Debris Landfill #5
Semivolatile Organic Compounds

Sample ID	Sample Date	Depth	Nitrobenzene	p-Dimethylaminoazobenzene	Pentachlorobenzene	Pentachloronitrobenzene	Pentachlorophenol	Phenacetin	Phenanthrene	Phenol	Pronamide	Pyrene
		CRQL	0.33	0.33	0.33	1.7	1.7	0.33	0.33	0.33	0.33	0.33
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS26S-01	9/24/95	1	<1	<0.495	<0.95	<3.3	<3.5	<2.95	380	<1	<0.95	500
FCDL#5-SS27S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	<0.015	<0.02	<0.019	<0.025
FCDL#5-SS28S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	<0.015	<0.02	<0.019	<0.025
FCDL#5-SS29S-01	9/24/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.048 J	<0.02	<0.019	0.094 J
FCDL#5-SS30S-01	9/24/95	1	<1	<0.495	<0.95	<3.3	<3.5	<2.95	930	<1	<0.95	970
FCDL#5-SS31S-01	9/23/95	1	<0.02	<0.0099	<0.019	<0.066	<0.07	<0.059	0.1 J	<0.02	<0.019	0.21 J
FCDL#5-SS32S-01	9/23/95	1	<0.2	<0.099	<0.19	<0.66	<0.7	<0.59	14	<0.2	<0.19	28
FCDL#5-SS33S-01	9/24/95	1	<0.04	<0.0198	<0.038	<0.132	<0.14	<0.118	2.8	<0.04	<0.038	4.2
FCDL#5-TP01S-01	4/23/96	3	<0.8	<0.396	<0.76	<2.64	<7.2	<2.36	100	<0.88	<0.76	140
FCDL#5-TP01S-02	4/23/96	3.5	<4	<1.98	<3.8	<13.2	<36	<11.8	550 J	<4.4	<3.8	800 J
FCDL#5-TP02S-01	4/23/96	1.5	<2	<0.99	<1.9	<6.6	<18	<5.9	420	<2.2	<1.9	690
FCDL#5-TP02S-02	4/23/96	2.5	<0.8	<0.396	<0.76	<2.64	<7.2	<2.36	150	<0.88	<0.76	180
FCDL#5-TP03S-01	4/23/96	3.5	<1	<0.495	<0.95	<3.3	<9	<2.95	200 J	<1.1	<0.95	280 J
FCDL#5-SB01S-01	5/3/96	0.5	<0.02	<0.0099	<0.019	<0.066	<0.18	<0.059	<0.023	<0.022	<0.019	<0.026
FCDL#5-SB01S-02	5/3/96	2.5	<0.02	<0.0099	<0.019	<0.066	<0.18	<0.059	<0.023	<0.022	<0.019	<0.026
FCDL#5-SB02S-01	5/3/96	0.5	<0.02	<0.0099	<0.019	<0.066	<0.18	<0.059	<0.023	<0.022	<0.019	<0.026
FCDL#5-SB02S-02	5/3/96	2.5	<0.02	<0.0099	<0.019	<0.066	<0.18	<0.059	<0.023	<0.022	<0.019	<0.026
FCDL#5-SB02S-03	5/3/96	5	<0.02	<0.0099	<0.019	<0.066	<0.18	<0.059	<0.023	<0.022	<0.019	<0.026
FCDL#5-SB03S-01	5/3/96	0.5	<0.1	<0.0495	<0.095	<0.33	<0.9	<0.295	24	<0.11	<0.095	26
FCDL#5-SB03S-02	5/3/96	2.5	<0.04	<0.0198	<0.038	<0.132	<0.36	<0.118	4.3	<0.044	<0.038	4.2
FCDL#5-SB03S-03	5/3/96	5	<2	<0.99	<1.9	<6.6	<18	<5.9	540 J	<2.2	<1.9	490 J
FCDL#5-SB03S-04	5/3/96	10	<2	<0.99	<1.9	<6.6	<18	<5.9	360	<2.2	<1.9	330
FCDL#5-SB04S-03	5/3/96	5.5	<0.02	<0.0099	<0.019	<0.066	<0.18	<0.059	3 J	<0.022	<0.019	3.3 J

Analyses	48	48	48	48	48	48	48	48	48	48	
Detections	0	0	0	0	0	0	35	0	0	34	
Maximum Concentration	0	0	0	0	0	0	840	0	0	1100	
Arizona HBGL - Nonresidential	203		329	18.2	46			245000	3080	12250	
Arizona HBGL - Nonresidential Hits	0		0	0	0			0	0	0	

Former Construction Debris Landfill #5
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID	Sample Date	Depth	4,4-DDD	4,4-DDE	4,4-DDT	Aldrin	alpha-BHC	alpha-Chlordane	Aroclor 1016	Aroclor 1221	Aroclor 1232
		CRQL	0.0033	0.0033	0.0033	0.0017	0.0017	0.0017	0.033	0.067	0.033
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.0007	<0.00024	<0.00062	<0.0001	<0.0003	<0.00011	<0.0019	<0	<0
FCDL#5-SS02S-01	9/23/95	1	<0.0007	<0.00024	<0.00062	<0.0001	<0.0003	<0.00011	<0.0019	<0	<0
FCDL#5-SS03S-01	9/23/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS04S-01	9/23/95	1	<0.0007	<0.00024	<0.00062	<0.0001	<0.0003	<0.00011	<0.0019	<0	<0
FCDL#5-SS05S-01	9/24/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS06S-01	9/24/95	1	<0.0007	<0.00024	<0.00062	<0.0001	<0.0003	<0.00011	<0.0019	<0	<0
FCDL#5-SS07S-01	9/23/95	1	<0.0007	<0.00024	<0.00062	<0.0001	<0.0003	<0.00011	<0.0019	<0	<0
FCDL#5-SS08S-01	9/23/95	1	<0.035	<0.012	<0.031	<0.005	<0.015	<0.0055	<0.095	<0	<0
FCDL#5-SS09S-01	9/23/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS10S-01	9/24/95	1	<0.007	<0.0024	<0.0062	<0.001	<0.003	<0.0011	<0.019	<0	<0
FCDL#5-SS11S-01	9/24/95	1	<0.035	<0.012	<0.031	<0.005	<0.015	<0.0055	<0.095	<0	<0
FCDL#5-SS12S-01	9/24/95	1	<0.0007	<0.00024	<0.00062	<0.0001	<0.0003	<0.00011	<0.0019	<0	<0
FCDL#5-SS13S-01	9/23/95	1	<0.0035	<0.0012	<0.0031	<0.0005	<0.0015	<0.00055	<0.0095	<0	<0
FCDL#5-SS14S-01	9/23/95	1	<0.0035	<0.0012	<0.0031	<0.0005	<0.0015	<0.00055	<0.0095	<0	<0
FCDL#5-SS15S-01	9/23/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS16S-01	9/23/95	1	<0.014	<0.0048	<0.0124	<0.002 UJ	<0.006	<0.0022	<0.038	<0	<0
FCDL#5-SS17S-01	9/24/95	1	<0.007	<0.0024	<0.0062	<0.001	<0.003	<0.0011	<0.019	<0	<0
FCDL#5-SS18S-01	9/24/95	1	<0.0175	<0.006	<0.0155	<0.0025	<0.0075	<0.00275	<0.0475	<0	<0
FCDL#5-SS19S-01	9/24/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS20S-01	9/24/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS21S-01	9/24/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS22S-01	9/24/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS23S-01	9/24/95	1	<0.007	<0.0024	<0.0062	<0.001	<0.003	<0.0011	<0.019	<0	<0
FCDL#5-SS24S-01	9/24/95	1	<0.007	<0.0024	<0.0062	<0.001	<0.003	<0.0011	<0.019	<0	<0
FCDL#5-SS25S-01	9/24/95	1	<0.007	<0.0024	<0.0062	<0.001	<0.003	<0.0011	<0.019	<0	<0
FCDL#5-SS26S-01	9/24/95	1	<0.0175	<0.006	<0.0155	<0.0025	<0.0075	<0.00275	<0.0475	<0	<0
FCDL#5-SS27S-01	9/24/95	1	<0.0007	<0.00024	<0.00062	<0.0001	<0.0003	<0.00011	<0.0019	<0	<0
FCDL#5-SS28S-01	9/24/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS29S-01	9/24/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SS30S-01	9/24/95	1	<0.035	<0.012	<0.031	<0.005	<0.015	<0.0055	<0.095	<0	<0
FCDL#5-SS31S-01	9/23/95	1	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0

Former Construction Debris Landfill #5
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID	Sample Date	Depth	4,4-DDD	4,4-DDE	4,4-DDT	Aldrin	alpha-BHC	alpha-Chlordane	Aroclor 1016	Aroclor 1221	Aroclor 1232
		CRQL	0.0033	0.0033	0.0033	0.0017	0.0017	0.0017	0.033	0.067	0.033
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS32S-01	9/23/95	1	<0.014	<0.0048	<0.0124	<0.002	<0.006	<0.0022	<0.038	<0	<0
FCDL#5-SS33S-01	9/24/95	1	<0.0035	<0.0012	<0.0031	<0.0005	<0.0015	<0.00055	<0.0095	<0	<0
FCDL#5-TP01S-01	4/23/96	3	<0.014	<0.0048	<0.0124	<0.002	<0.006	<0.0022	<0.038	<0	<0
FCDL#5-TP01S-02	4/23/96	3.5	<0.14	<0.048	<0.124	<0.02	<0.06	<0.022	<0.38	<0	<0
FCDL#5-TP02S-01	4/23/96	1.5	<0.14	<0.048	<0.124	<0.02	<0.06	<0.022	<0.38	<0	<0
FCDL#5-TP02S-02	4/23/96	2.5	<0.035	<0.012	<0.031	<0.005	<0.015	<0.0055	<0.095	<0	<0
FCDL#5-TP03S-01	4/23/96	3.5	<0.14	<0.048	<0.124	<0.02	<0.06	<0.022	<0.38	<0	<0
FCDL#5-SB01S-01	5/3/96	0.5	<0.0007 U	<0.00024 U	<0.00062 U	<0.0001 U	<0.0003 U	<0.00011 U	<0.0019 U	<0 U	<0 U
FCDL#5-SB01S-02	5/3/96	2.5	<0.0007 U	<0.00024 U	<0.00062 U	<0.0001 U	<0.0003 U	<0.00011 U	<0.0019 U	<0 U	<0 U
FCDL#5-SB02S-01	5/3/96	0.5	<0.0007	<0.00024	<0.00062	<0.0001	<0.0003	<0.00011	<0.0019	<0	<0
FCDL#5-SB02S-02	5/3/96	2.5	<0.0007	<0.00024	<0.00062	<0.0001	<0.0003	<0.00011	<0.0019	<0	<0
FCDL#5-SB02S-03	5/3/96	5	<0.0007 U	<0.00024 U	<0.00062 U	<0.0001 U	<0.0003 U	<0.00011 U	<0.0019 U	<0 U	<0 U
FCDL#5-SB03S-01	5/3/96	0.5	<0.0035	0.027	<0.0031	<0.0005	<0.0015	<0.00055	<0.0095	<0	<0
FCDL#5-SB03S-02	5/3/96	2.5	<0.0014	<0.00048	<0.00124	<0.0002	<0.0006	<0.00022	<0.0038	<0	<0
FCDL#5-SB03S-03	5/3/96	5	<0.014	<0.0048	<0.0124	<0.002	<0.006	<0.0022	<0.038	<0	<0
FCDL#5-SB03S-04	5/3/96	10	<0.035	<0.012	<0.031	<0.005	<0.015	<0.0055	<0.095	<0	<0
FCDL#5-SB04S-03	5/3/96	5.5	<0.0035	<0.0012	<0.0031	<0.0005	<0.0015	<0.00055	<0.0095	<0	<0

Analyses	48	48	48	48	48	48	48	48	48	
Detections	0	1	0	0	0	0	0	0	0	
Maximum Concentration	0	0.027	0	0	0	0	0	0	0	
Arizona HBGL - Nonresidential	23.9	17	17	0.34	0.92	4	0.76	0.76	0.76	
Arizona HBGL - Nonresidential Hits	0	0	0	0	0	0	0	0	0	

Former Construction Debris Landfill #5
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID	Sample Date	Depth	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	beta-BHC	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
		CRQL	0.033	0.033	0.033	0.033	0.0017	0.0017	0.033	0.0017	0.033
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0	<0	<0	<0.0024	<0.0012	<0.000098	<0.00056	<0.0011	<0.00025
FCDL#5-SS02S-01	9/23/95	1	<0	<0	<0	<0.0024	<0.0012	<0.000098	<0.00056	<0.0011	<0.00025
FCDL#5-SS03S-01	9/23/95	1	<0	<0	<0	<0.0048	<0.0024	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS04S-01	9/23/95	1	<0	<0	<0	<0.0024	<0.0012	<0.000098	<0.00056	<0.0011	<0.00025
FCDL#5-SS05S-01	9/24/95	1	<0	<0	<0	<0.0048	<0.0024	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS06S-01	9/24/95	1	<0	<0	<0	<0.0024	<0.0012	<0.000098	<0.00056	<0.0011	<0.00025
FCDL#5-SS07S-01	9/23/95	1	<0	<0	<0	<0.0024	<0.0012	<0.000098	<0.00056	<0.0011	<0.00025
FCDL#5-SS08S-01	9/23/95	1	<0	<0	<0	<0.12	<0.06	<0.0049	<0.028	<0.055	<0.0125
FCDL#5-SS09S-01	9/23/95	1	<0	<0	<0	<0.0048	<0.0024	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS10S-01	9/24/95	1	<0	<0	<0	<0.024	<0.012	<0.00098	<0.0056	<0.011	<0.0025
FCDL#5-SS11S-01	9/24/95	1	<0	<0	<0	<0.12	<0.06	<0.0049	<0.028	<0.055	<0.0125
FCDL#5-SS12S-01	9/24/95	1	<0	<0	<0	<0.0024	<0.0012	<0.000098	<0.00056	<0.0011	<0.00025
FCDL#5-SS13S-01	9/23/95	1	<0	<0	<0	<0.012	<0.006	<0.00049	<0.0028	<0.0055	<0.00125
FCDL#5-SS14S-01	9/23/95	1	<0	<0	<0	<0.012	<0.006	<0.00049	<0.0028	<0.0055	<0.00125
FCDL#5-SS15S-01	9/23/95	1	<0	<0	<0	<0.0048	<0.0024	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS16S-01	9/23/95	1	<0	<0	<0	<0.048	<0.024 UJ	<0.00196	<0.0112	<0.022	<0.005
FCDL#5-SS17S-01	9/24/95	1	<0	<0	<0	<0.024	<0.012 UJ	<0.00098	<0.0056	<0.011	<0.0025
FCDL#5-SS18S-01	9/24/95	1	<0	<0	<0	<0.06	<0.03 UJ	<0.00245	<0.014	<0.0275	<0.00625
FCDL#5-SS19S-01	9/24/95	1	<0	<0	<0	<0.0048	<0.0024 UJ	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS20S-01	9/24/95	1	<0	<0	<0	<0.0048	<0.0024 UJ	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS21S-01	9/24/95	1	<0	<0	<0	<0.0048	<0.0024 UJ	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS22S-01	9/24/95	1	<0	<0	<0	<0.0048	<0.0024 UJ	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS23S-01	9/24/95	1	<0	<0	<0	<0.024	<0.012 UJ	<0.00098	<0.0056	<0.011	<0.0025
FCDL#5-SS24S-01	9/24/95	1	<0	<0	<0	<0.024	<0.012 UJ	<0.00098	<0.0056	<0.011	<0.0025
FCDL#5-SS25S-01	9/24/95	1	<0	<0	<0	<0.024	<0.012 UJ	<0.00098	<0.0056	<0.011	<0.0025
FCDL#5-SS26S-01	9/24/95	1	<0	<0	<0	<0.06	<0.03	<0.00245	<0.014	<0.0275	<0.00625
FCDL#5-SS27S-01	9/24/95	1	<0	<0	<0	<0.0024	<0.0012	<0.000098	<0.00056	<0.0011	<0.00025
FCDL#5-SS28S-01	9/24/95	1	<0	<0	<0	<0.0048	<0.0024	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS29S-01	9/24/95	1	<0	<0	<0	<0.0048	<0.0024	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SS30S-01	9/24/95	1	<0	<0	<0	<0.12	<0.06	<0.0049	<0.028	<0.055	<0.0125
FCDL#5-SS31S-01	9/23/95	1	<0	<0	<0	<0.0048	<0.0024	<0.000196	<0.00112	<0.0022	<0.0005

Former Construction Debris Landfill #5
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID	Sample Date	Depth	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	beta-BHC	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II
		CRQL	0.033	0.033	0.033	0.033	0.0017	0.0017	0.033	0.0017	0.033
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS32S-01	9/23/95	1	<0	<0	<0	<0.048	<0.024	<0.00196	<0.0112	<0.022	<0.005
FCDL#5-SS33S-01	9/24/95	1	<0	<0	<0	<0.012	<0.006	<0.00049	<0.0028	<0.0055	<0.00125
FCDL#5-TP01S-01	4/23/96	3	<0	<0	<0	<0.048	<0.024	<0.00196	<0.0112	<0.022	<0.005
FCDL#5-TP01S-02	4/23/96	3.5	<0	<0	<0	<0.48	<0.24	<0.0196	<0.112	<0.22	<0.05
FCDL#5-TP02S-01	4/23/96	1.5	<0	<0	<0	<0.48	<0.24	<0.0196	<0.112	<0.22	<0.05
FCDL#5-TP02S-02	4/23/96	2.5	<0	<0	<0	<0.12	<0.06	<0.0049	<0.028	<0.055	<0.0125
FCDL#5-TP03S-01	4/23/96	3.5	<0	<0	<0	<0.48	<0.24	<0.0196	<0.112	<0.22	<0.05
FCDL#5-SB01S-01	5/3/96	0.5	<0 U	<0 U	<0 U	<0.0024 U	<0.0012 U	<0.000098 U	<0.00056 U	<0.0011 U	<0.00025 U
FCDL#5-SB01S-02	5/3/96	2.5	<0 U	<0 U	<0 U	<0.0024 U	<0.0012 U	<0.000098 U	<0.00056 U	<0.0011 U	<0.00025 U
FCDL#5-SB02S-01	5/3/96	0.5	<0	<0	<0	<0.0024	<0.0012	<0.000098	<0.00056	<0.0011	<0.00025
FCDL#5-SB02S-02	5/3/96	2.5	<0	<0	<0	<0.0024	<0.0012	<0.000098	<0.00056	<0.0011	<0.00025
FCDL#5-SB02S-03	5/3/96	5	<0 U	<0 U	<0 U	<0.0024 U	<0.0012 U	<0.000098 U	<0.00056 U	<0.0011 U	<0.00025 U
FCDL#5-SB03S-01	5/3/96	0.5	<0	<0	<0	<0.012	<0.006	<0.00049	<0.0028	<0.0055	<0.00125
FCDL#5-SB03S-02	5/3/96	2.5	<0	<0	<0	<0.0048	<0.0024	<0.000196	<0.00112	<0.0022	<0.0005
FCDL#5-SB03S-03	5/3/96	5	<0	<0	<0	<0.048	<0.024	<0.00196	<0.0112	<0.022	<0.005
FCDL#5-SB03S-04	5/3/96	10	<0	<0	<0	<0.12	<0.06	<0.0049	<0.028	<0.055	<0.0125
FCDL#5-SB04S-03	5/3/96	5.5	<0	<0	<0	<0.012	<0.006	<0.00049	<0.0028	<0.0055	<0.00125

Analyses	48	48	48	48	48	48	48	48	48	
Detections	0	0	0	0	0	0	0	0	0	
Maximum Concentration	0	0	0	0	0	0	0	0	0	
Arizona HBGL - Nonresidential	0.76	0.76	0.76	0.76	3.19	3.19	0.38	2450	2450	
Arizona HBGL - Nonresidential Hits	0	0	0	0	0	0	0	0	0	

Former Construction Debris Landfill #5
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID	Sample Date	Depth	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC (Lindane)	gamma-Chlordane	Heptachlor	Heptachlor epoxide
		CRQL	0.033	0.033	0.033	0.033	0.0017	0.0017	0.0017	0.0017
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.00022	<0.00063 UJ	<0.00024	<0.00026	<0.00035	<0.00011	<0.00034	<0.00012
FCDL#5-SS02S-01	9/23/95	1	<0.00022	<0.00063 UJ	<0.00024	<0.00026	<0.00035	<0.00011	<0.00034	<0.00012
FCDL#5-SS03S-01	9/23/95	1	<0.00044	<0.00126 UJ	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS04S-01	9/23/95	1	<0.00022	<0.00063 UJ	<0.00024	<0.00026	<0.00035	<0.00011	<0.00034	<0.00012
FCDL#5-SS05S-01	9/24/95	1	<0.00044	<0.00126 UJ	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS06S-01	9/24/95	1	<0.00022	<0.00063 UJ	<0.00024	<0.00026	<0.00035	<0.00011	<0.00034	<0.00012
FCDL#5-SS07S-01	9/23/95	1	<0.00022	<0.00063 UJ	<0.00024	<0.00026	<0.00035	<0.00011	<0.00034	<0.00012
FCDL#5-SS08S-01	9/23/95	1	<0.011	<0.0315 UJ	<0.012	<0.013	<0.0175	<0.0055	<0.017	<0.006
FCDL#5-SS09S-01	9/23/95	1	<0.00044	<0.00126 UJ	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS10S-01	9/24/95	1	<0.0022	<0.0063 UJ	<0.0024	<0.0026	<0.0035	<0.0011	<0.0034	<0.0012
FCDL#5-SS11S-01	9/24/95	1	<0.011	<0.0315 UJ	<0.012	<0.013	<0.0175	<0.0055	<0.017	<0.006
FCDL#5-SS12S-01	9/24/95	1	<0.00022	<0.00063 UJ	<0.00024	<0.00026	<0.00035	<0.00011	<0.00034	<0.00012
FCDL#5-SS13S-01	9/23/95	1	<0.0011	<0.00315 UJ	<0.0012	<0.0013	<0.00175	<0.00055	<0.0017	<0.0006
FCDL#5-SS14S-01	9/23/95	1	<0.0011	<0.00315 UJ	<0.0012	<0.0013	<0.00175	<0.00055	<0.0017	<0.0006
FCDL#5-SS15S-01	9/23/95	1	<0.00044	<0.00126 UJ	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS16S-01	9/23/95	1	<0.0044	<0.0126	<0.0048	<0.0052	<0.007	<0.0022	<0.0068 U	<0.0024
FCDL#5-SS17S-01	9/24/95	1	<0.0022	<0.0063	<0.0024	<0.0026	<0.0035	<0.0011	<0.0034	<0.0012
FCDL#5-SS18S-01	9/24/95	1	<0.0055	<0.01575	<0.006	<0.0065	<0.00875	<0.00275	<0.0085	<0.003
FCDL#5-SS19S-01	9/24/95	1	<0.00044	<0.00126	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS20S-01	9/24/95	1	<0.00044	<0.00126	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS21S-01	9/24/95	1	<0.00044	<0.00126	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS22S-01	9/24/95	1	<0.00044	<0.00126	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS23S-01	9/24/95	1	<0.0022	<0.0063	<0.0024	<0.0026	<0.0035	<0.0011	<0.0034	<0.0012
FCDL#5-SS24S-01	9/24/95	1	<0.0022	<0.0063	<0.0024	<0.0026	<0.0035	<0.0011	<0.0034	<0.0012
FCDL#5-SS25S-01	9/24/95	1	<0.0022	<0.0063	<0.0024	<0.0026	<0.0035	<0.0011	<0.0034	<0.0012
FCDL#5-SS26S-01	9/24/95	1	<0.0055	<0.01575	<0.006	<0.0065	<0.00875	<0.00275	<0.0085	<0.003
FCDL#5-SS27S-01	9/24/95	1	<0.00022	<0.00063	<0.00024	<0.00026	<0.00035	<0.00011	<0.00034	<0.00012
FCDL#5-SS28S-01	9/24/95	1	<0.00044	<0.00126	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS29S-01	9/24/95	1	<0.00044	<0.00126	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SS30S-01	9/24/95	1	<0.011	<0.0315	<0.012	<0.013	<0.0175	<0.0055	<0.017	<0.006
FCDL#5-SS31S-01	9/23/95	1	<0.00044	<0.00126	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024

Former Construction Debris Landfill #5
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID	Sample Date	Depth	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC (Lindane)	gamma-Chlordane	Heptachlor	Heptachlor epoxide
		CRQL	0.033	0.033	0.033	0.033	0.0017	0.0017	0.0017	0.0017
		Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
FCDL#5-SS32S-01	9/23/95	1	<0.0044	<0.0126	<0.0048	<0.0052	<0.007	<0.0022	<0.0068	<0.0024
FCDL#5-SS33S-01	9/24/95	1	<0.0011	<0.00315	<0.0012	<0.0013	<0.00175	<0.00055	<0.0017	<0.0006
FCDL#5-TP01S-01	4/23/96	3	<0.0044	<0.0126	<0.0048	<0.0052	<0.007	<0.0022	<0.0068	<0.0024
FCDL#5-TP01S-02	4/23/96	3.5	<0.044	<0.126	<0.048	<0.052	<0.07	<0.022	<0.068	<0.024
FCDL#5-TP02S-01	4/23/96	1.5	<0.044	<0.126	<0.048	<0.052	<0.07	<0.022	<0.068	<0.024
FCDL#5-TP02S-02	4/23/96	2.5	<0.011	<0.0315	<0.012	<0.013	<0.0175	<0.0055	<0.017	<0.006
FCDL#5-TP03S-01	4/23/96	3.5	<0.044	<0.126	<0.048	<0.052	<0.07	<0.022	<0.068	<0.024
FCDL#5-SB01S-01	5/3/96	0.5	<0.00022 UJ	<0.00063 UJ	<0.00024 UJ	<0.00026 UJ	<0.00035 UJ	<0.00011 UJ	<0.00034 UJ	<0.00012 UJ
FCDL#5-SB01S-02	5/3/96	2.5	<0.00022 UJ	<0.00063 UJ	<0.00024 UJ	<0.00026 UJ	<0.00035 UJ	<0.00011 UJ	<0.00034 UJ	<0.00012 UJ
FCDL#5-SB02S-01	5/3/96	0.5	<0.00022	<0.00063	<0.00024	<0.00026	<0.00035	<0.00011	<0.00034	<0.00012
FCDL#5-SB02S-02	5/3/96	2.5	<0.00022	<0.00063	<0.00024	<0.00026	<0.00035	<0.00011	<0.00034	<0.00012
FCDL#5-SB02S-03	5/3/96	5	<0.00022 UJ	<0.00063 UJ	<0.00024 UJ	<0.00026 UJ	<0.00035 UJ	<0.00011 UJ	<0.00034 UJ	<0.00012 UJ
FCDL#5-SB03S-01	5/3/96	0.5	<0.0011	<0.00315	<0.0012	<0.0013	<0.00175	<0.00055	<0.0017	<0.0006
FCDL#5-SB03S-02	5/3/96	2.5	<0.00044	<0.00126	<0.00048	<0.00052	<0.0007	<0.00022	<0.00068	<0.00024
FCDL#5-SB03S-03	5/3/96	5	<0.0044	<0.0126	<0.0048	<0.0052	<0.007	<0.0022	<0.0068	<0.0024
FCDL#5-SB03S-04	5/3/96	10	<0.011	<0.0315	<0.012	<0.013	<0.0175	<0.0055	<0.017	<0.006
FCDL#5-SB04S-03	5/3/96	5.5	<0.0011	<0.00315	<0.0012	<0.0013	<0.00175	<0.00055	<0.0017	<0.0006

Analyses	48	48	48	48	48	48	48	48
Detections	0	0	0	0	0	0	0	0
Maximum Concentration	0	0	0	0	0	0	0	0
Arizona HBGL - Nonresidential		123			4	4	1.3	0.63
Arizona HBGL - Nonresidential Hits		0			0	0	0	0

Former Construction Debris Landfill #5
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID	Sample Date	Depth	Methoxychlor	Toxaphene
		CRQL	0.017	0.17
		Units	mg/kg	mg/kg
FCDL#5-SS01S-01	9/23/95	1	<0.0038	<0.023
FCDL#5-SS02S-01	9/23/95	1	<0.0038	<0.023
FCDL#5-SS03S-01	9/23/95	1	<0.0076	<0.046
FCDL#5-SS04S-01	9/23/95	1	<0.0038	<0.023
FCDL#5-SS05S-01	9/24/95	1	<0.0076	<0.046
FCDL#5-SS06S-01	9/24/95	1	<0.0038	<0.023
FCDL#5-SS07S-01	9/23/95	1	<0.0038	<0.023
FCDL#5-SS08S-01	9/23/95	1	<0.19	<1.15
FCDL#5-SS09S-01	9/23/95	1	<0.0076	<0.046
FCDL#5-SS10S-01	9/24/95	1	<0.038	<0.23
FCDL#5-SS11S-01	9/24/95	1	<0.19	<1.15
FCDL#5-SS12S-01	9/24/95	1	<0.0038	<0.023
FCDL#5-SS13S-01	9/23/95	1	<0.019	<0.115
FCDL#5-SS14S-01	9/23/95	1	<0.019	<0.115
FCDL#5-SS15S-01	9/23/95	1	<0.0076	<0.046
FCDL#5-SS16S-01	9/23/95	1	<0.076	<0.46
FCDL#5-SS17S-01	9/24/95	1	<0.038	<0.23
FCDL#5-SS18S-01	9/24/95	1	<0.095	<0.575
FCDL#5-SS19S-01	9/24/95	1	<0.0076	<0.046
FCDL#5-SS20S-01	9/24/95	1	<0.0076	<0.046
FCDL#5-SS21S-01	9/24/95	1	<0.0076	<0.046
FCDL#5-SS22S-01	9/24/95	1	<0.0076	<0.046
FCDL#5-SS23S-01	9/24/95	1	<0.038	<0.23
FCDL#5-SS24S-01	9/24/95	1	<0.038	<0.23
FCDL#5-SS25S-01	9/24/95	1	<0.038	<0.23
FCDL#5-SS26S-01	9/24/95	1	<0.095	<0.575
FCDL#5-SS27S-01	9/24/95	1	<0.0038	<0.023
FCDL#5-SS28S-01	9/24/95	1	<0.0076	<0.046
FCDL#5-SS29S-01	9/24/95	1	<0.0076	<0.046
FCDL#5-SS30S-01	9/24/95	1	<0.19	<1.15
FCDL#5-SS31S-01	9/23/95	1	<0.0076	<0.046

Former Construction Debris Landfill #5
Organochlorine Pesticides and Polychlorinated Biphenyls (PCBs)

Sample ID	Sample Date	Depth	Methoxychlor	Toxaphene
		CRQL	0.017	0.17
		Units	mg/kg	mg/kg
FCDL#5-SS32S-01	9/23/95	1	<0.076	<0.46
FCDL#5-SS33S-01	9/24/95	1	<0.019	<0.115
FCDL#5-TP01S-01	4/23/96	3	<0.076	<0.46
FCDL#5-TP01S-02	4/23/96	3.5	<0.76	<4.6
FCDL#5-TP02S-01	4/23/96	1.5	<0.76	<4.6
FCDL#5-TP02S-02	4/23/96	2.5	<0.19	<1.15
FCDL#5-TP03S-01	4/23/96	3.5	<0.76	<4.6
FCDL#5-SB01S-01	5/3/96	0.5	<0.0038 UJ	<0.023 UJ
FCDL#5-SB01S-02	5/3/96	2.5	<0.0038 UJ	<0.023 UJ
FCDL#5-SB02S-01	5/3/96	0.5	<0.0038	<0.023
FCDL#5-SB02S-02	5/3/96	2.5	<0.0038	<0.023
FCDL#5-SB02S-03	5/3/96	5	<0.0038 UJ	<0.023 UJ
FCDL#5-SB03S-01	5/3/96	0.5	<0.019	<0.115
FCDL#5-SB03S-02	5/3/96	2.5	<0.0076	<0.046
FCDL#5-SB03S-03	5/3/96	5	<0.076	<0.46
FCDL#5-SB03S-04	5/3/96	10	<0.19	<1.15
FCDL#5-SB04S-03	5/3/96	5.5	<0.019	<0.115

Analyses	48	48
Detections	0	0
Maximum Concentration	0	0
Arizona HBGL - Nonresidential	2030	5
Arizona HBGL - Nonresidential Hits	0	0

APPENDIX I

SOIL PHYSICAL CHARACTERISTICS

APPENDIX J

QUANTERRA CERTIFICATES OF ANALYSIS

Note: Certificates of Analysis will be provided in select copies of the Final Report. For access to a complete copy of the Certificates of Analysis, please contact the Camp Navajo Environmental Office at (520) 773-3208.